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ALLEGHENY RESERVOIR, MC KEAN AND WARREN COUNTIES, PENNSYLVANIA, AND CATTARAUGUS COUNTY, NEW YORK

Pacific Northwest Environmental Research Laboratory

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16. ABSTRACT

Annual total phosphorus and total nitrogen loadings to the lake were estimated and subdivided according to either point or non-point source origin. An assessment of the lake's trophic condition and limiting nutrient is also provided. All data collected by the U.S.E.P.A. National Eutrophication Survey during the one year study of the lake and its tributaries are included in the report.

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REPORT
ON
ALLEGHENY RESERVOIR
McKEAN AND WARREN COUNTIES, PENNSYLVANIA
AND
CATTARAUGUS COUNTY, NEW YORK
EPA REGIONS II AND III
WORKING PAPER No. 147

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FOREWORD

The National Eutrophication Survey was initiated in 1972 in response to an Administration commitment to investigate the nationwide threat of accelerated eutrophication to fresh water lakes and reservoirs.

OBJECTIVES

The Survey was designed to develop, in conjunction with state environmental agencies, information on nutrient sources, concentrations, and impact on selected freshwater lakes as a basis for formulating comprehensive and coordinated national, regional, and state management practices relating to point-source discharge reduction and non-point source pollution abatement in lake watersheds.

ANALYTIC APPROACH

The mathematical and statistical procedures selected for the Survey's eutrophication analysis are based on related concepts that:

a. A generalized representation or model relating sources, concentrations, and impacts can be constructed.

b. By applying measurements of relevant parameters associated with lake degradation, the generalized model can be transformed into an operational representation of a lake, its drainage basin, and related nutrients.

c. With such a transformation, an assessment of the potential for eutrophication control can be made.

LAKE ANALYSIS

In this report, the first stage of evaluation of lake and watershed data collected from the study lake and its drainage basin is documented. The report is formatted to provide state environmental agencies with specific information for basin planning [§303(e)], water quality criteria/standards review [§303(c)], clean lakes [§314(a,b)], and water quality monitoring [§106 and §305(b)] activities mandated by the Federal Water Pollution Control Act Amendments of 1972.

Beyond the single lake analysis, broader based correlations between nutrient concentrations (and loading) and trophic condition are being made to advance the rationale and data base for refinement of nutrient water quality criteria for the Nation's fresh water lakes. Likewise, multivariate evaluations for the relationships between land use, nutrient export, and trophic condition, by lake class or use, are being developed to assist in the formulation of planning guidelines and policies by EPA and to augment plans implementation by the states.

ACKNOWLEDGMENT

The staff of the National Eutrophication Survey (Office of Research & Development, U. S. Environmental Protection Agency) expresses sincere appreciation to the New York Department of Environmental Conservation and the Pennsylvania Department of Environmental Resources for professional involvement and to the New York and Pennsylvania National Guards for conducting the tributary sampling phase of the Survey.

Henry L. Diamond, commissioner, and Leo J. Hetling and Italo G. Carcich of the New York Department of Environmental Conservation; and Walter J. Lyon, Director, and Richard A. Boardman and James T. Ulanoski of the Pennsylvania Bureau of Water Quality, provided invaluable reservoir documentation and counsel during the Survey, reviewed the preliminary report, and provided critiques most useful in the preparation of this report on Allegheny Reservoir.

Major General John C. Baker, Chief of Staff to the Governor of New York; Major General Harry J. Mier, Jr., Adjutant General of Pennsylvania; and Project Officers Lt. Colonel Fred Peters and Major Ronald E. Wickard, who directed the volunteer efforts of the New York and Pennsylvania National Guardsmen, respectively, are also gratefully acknowledged for their assistance to the Survey.

NATIONAL EUTROPHICATION SURVEY

STUDY LAKES

STATE OF NEW YORK

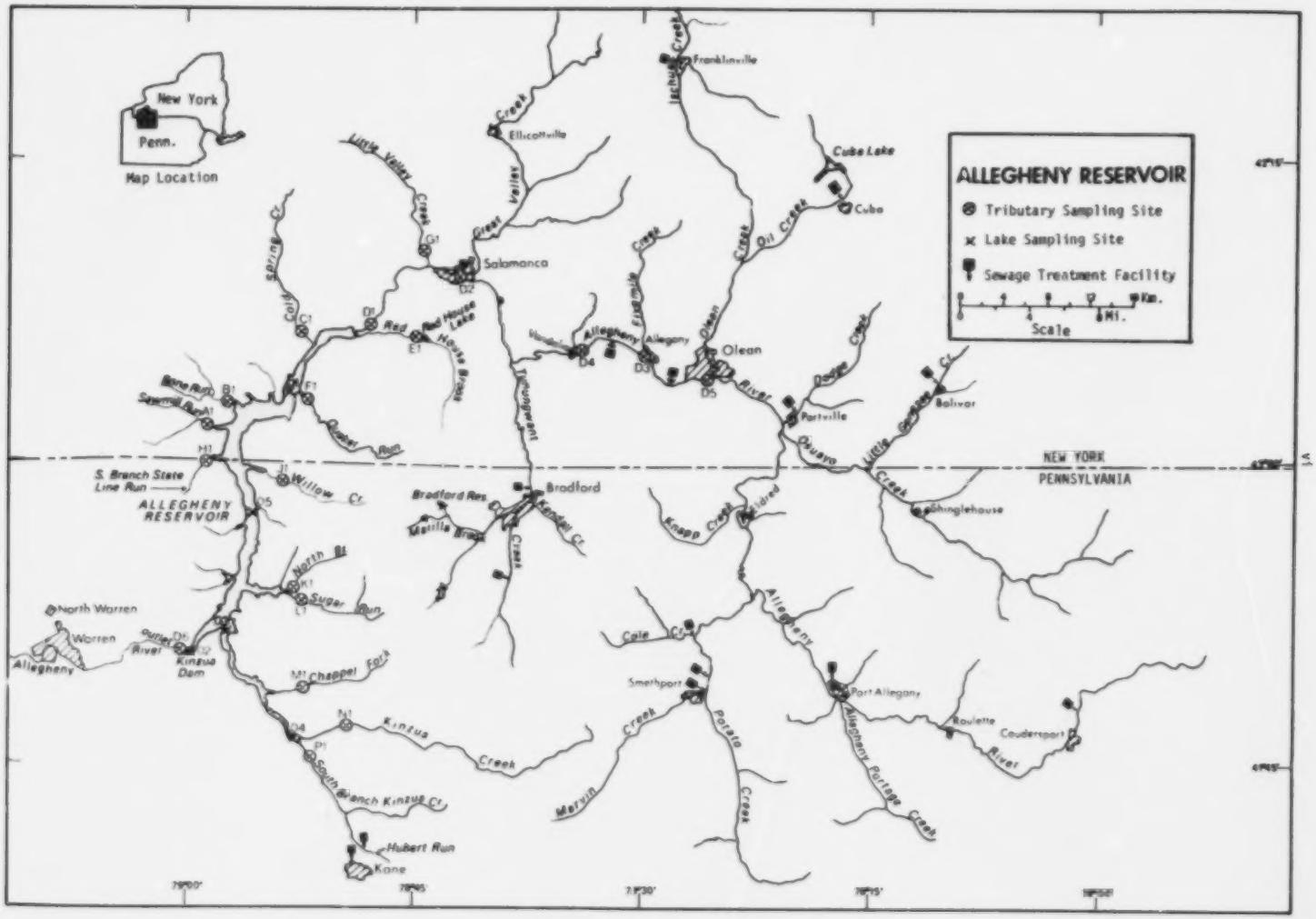
LAKE NAME	COUNTY
Allegheny Reservoir	Cattaraugas, NY; McLean, Warren, PA
Black	St. Lawrence
Canadaigua	Ontario
Cannonsville	Delaware
Carry Falls	St. Lawrence
Cassadaga	Chautauqua
Cayuga	Seneca, Tompkins
Champlain	Clinton, Essex, NY; Addison, Chittenden, Franklin, VT
Chautauqua	Chautauqua
Conesus	Livingston
Cross	Cayuga, Onondaga
Goodyear	Otsego
Huntington	Sullivan
Keuka	Ontario
Long	Hamilton
Lower St. Regis	Franklin
Otter	Cayuga
Owasco	Cayuga
Raquette Pond	Franklin
Round	Saratoga
Sacandaga Res.	Fulton, Saratoga
Saratoga	Saratoga
Schroon	Essex, Warren
Seneca	Seneca, Schyler, Yates
Swan	Sullivan
Swinging Bridge Res.	Sullivan

NATIONAL EUTROPHICATION SURVEY

STUDY LAKES

STATE OF PENNSYLVANIA

LAKE NAME	COUNTY
Allegheny Reservoir	McKean, Warren, PA; Cattaraugus, NY
Beaver Run Reservoir	Westmoreland
Beltzville	Carbon
Blanchard Reservoir	Centre
Canadohta	Crawford
Conneaut	Crawford
Conewago (Pinchot)	York
Greenlane	Montgomery
Harveys	Luzerne
Indian	Somerset
Naomi	Monroe
Ontelaunee	Berks
Pocono	Monroe
Pymatuning Reservoir	Crawford, PA; Ashtabula, OH
Shenango River Reservoir	Mercer
Stillwater	Monroe
Wallenpaupack	Pike, Wayne


New York
Penn.
Map Location
ALLEGHENY RESERVOIR
Tributary Sampling Site
Lake Sampling Site
Sewage Treatment Facility
Scale
Mi.
Km.
NEW YORK
PENNSYLVANIA
S. Branch State Line Run
ALLEGHENY RESERVOIR
Willow Cr.
Bradford
Bradford Run
Mutilla Brook
Kendall Cr.
Tuna Creek
Salamanca
Ellicottville
Little Valley Creek
Great Valley
Spring Cr.
Gold
Red
Red House Lake
Red House Brook
Quaker Run
Barnes Run
Sawmill Run
Franklinville
Cuba Lake
Cuba
Oil Creek
Allegany
Olean
Olean Creek
Dodge Creek
Portville
Ohsawa
Little Genesee Cr.
Bolivar
Knapp Creek
Kidred
Shinglehouse
Allegheny
Cole Cr.
Smethport
Port Allegany
Boulette
Coudersport
Potato Creek
Marvin Creek
Allegheny Portage Creek
North Bl
Sugar Run
North Warren
Warren
Allegheny
Outlet
Kinzua Dam
Mt Chappel Fork
Kinzua Creek
South Branch Kinzua Cr.
Hubert Run
Kane
79°00'
78°45'
78°30'
78°15'
78°00'
42°15'
42°00'
41°45'

ALLEGHENY RESERVOIR*

STORET NO. 3641

I. CONCLUSIONS

A. Trophic Condition:

Survey data indicate that the New York portion (station 1, northeast embayment) and the Kinzua Creek portion in Pennsylvania (station 4, southeast embayment) of Allegheny Reservoir are eutrophic. The quality of the central portion of the reservoir differs from these two areas and, based on the low median total phosphorus, mean chlorophyll a, and mean Secchi disc values at each sampling site (stations 2, 3, and 5), it appears to be mesotrophic. The reservoir ranked tenth in overall trophic quality when the 17 Pennsylvania lakes sampled in 1973 were compared using a combination of six parameters**. Seven of the lakes had less median total phosphorus, five had less and three had the same median dissolved phosphorus, ten had less median inorganic nitrogen, four had less mean chlorophyll a, and six had greater mean Secchi disc transparency. Depression of dissolved oxygen with depth occurred at station 1 in July of 1972; at stations 2, 3, and 5 in July, 1973; and at stations 2 and 3 in September, 1973.

Survey limnologists noted moderate algal blooms at station 1 in July of 1972. The four sites sampled in 1973 were reported to be free of algal blooms and macrophytes.

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* Table of metric conversions--Appendix A.

** See Appendix B.

B. Rate-Limiting Nutrient:

The algal assay results indicate that Allegheny Reservoir was limited by phosphorus at the time the sample was taken. These results are substantiated by the lake data; i.e., the mean inorganic nitrogen to orthophosphorus (dissolved phosphorus at station 1) ratios were 23 to 1 or greater at all sampling times.

C. Nutrient Controllability:

1. Point sources--The phosphorus contribution of the listed point sources accounted for 26.3% of the total load to Allegheny Reservoir. Bradford, PA, contributed 9.1% of this total, Olean, NY, contributed 7.5%, and Salamanca, NY, contributed 2.2%. The remaining listed point sources collectively contributed 7.5% of the total.

There are other known point sources beyond the 40-kilometer limit of the Survey* that impact tributaries of Allegheny Reservoir. For this reason, it is likely that the percentage of the total phosphorus load contributed by point sources is greater than indicated above.

The present loading rate of 3.31 $g/m^2/yr$ is two times the rate proposed by Vollenweider (Vollenweider and Dillon, 1974) as a eutrophic rate (see page 20). For this reason, all phosphorus inputs should be minimized to the greatest practicable

* See Working Paper No. 175, "...Survey Methods, 1973-1976".

extent. While even complete removal of phosphorus at the listed point sources would only reduce the loading rate to 2.44 $g/m^2/yr$, it is likely that a high degree of phosphorus control at all of the point sources would at least slow the present rate of eutrophication. The relatively short hydraulic retention time (77 days) would facilitate water quality improvement once phosphorus controls are initiated.

2. Non-point sources--The phosphorus contribution of non-point sources amounted to 73.7% of the total load to Allegheny Reservoir during the sampling year. The Allegheny River contributed the major portion of this load (66.2%). The remaining 13 sampled tributaries collectively contributed 4.9%. Ungaged tributaries were estimated to have contributed 2.1%.

The phosphorus export rate of the Allegheny River was appreciably higher than the rates of the other reservoir tributaries (see page 19). It is probable that the higher rate is due to the known but unmeasured point-source phosphorus contributions noted above.

II. LAKE AND DRAINAGE BASIN CHARACTERISTICS

A. Lake Morphometry†:

1. Surface area: 48.77 kilometers^2.
2. Mean depth: 14.4 meters.
3. Maximum depth: 39.0 meters.
4. Volume: 702.288 x 10^6 m^3.
5. Mean hydraulic retention time: 77 days.

B. Tributary and Outlet:
(See Appendix C for flow data)

1. Tributaries -

Name	Drainage area (km^2)††	Mean flow (m^3/sec)††
Sawmill Run	27.7	0.5
Bone Run	28.7	0.5
Cold Spring Creek	72.8	1.3
Allegheny River	4,256.9	76.2
Red House Brook	67.9	1.3
Quaker Run	67.9	1.3
Little Valley Creek*	120.2	2.2
S. Br., State Line Run	11.7	0.3
Willow Creek	40.9	1.2
N. Br., Sugar Run	30.6	0.4
Sugar Run	62.2	0.8
Chappel Fork	55.7	0.6
Kinzua Creek	176.6	3.0
S. Br., Kinzua Creek	101.0	1.4
Minor tributaries & immediate drainage -	476.6	9.8
Totals	5,597.4	100.8

2. Outlet -

Allegheny River	5,646.2**	105.6

C. Precipitation***:

1. Year of sampling: 108.4 centimeters.
2. Mean annual: 107.5 centimeters.

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† Ulanoski, 1975.
†† For limits of accuracy, see Working Paper No. 175.
* Since Little Valley Creek is upstream of the Allegheny River inlet station (D-1), the drainage area and flow of the creek was subtracted from the drainage area and flow of Allegheny River (see Appendix C).
** Includes area of lake.
*** See Working Paper No. 175.

III. LAKE WATER QUALITY SUMMARY

By means of a pontoon-equipped Huey helicopter, the New York portion of the Allegheny Reservoir was sampled three times at station 1 during the open-water season of 1972; and the Pennsylvania portion of the reservoir was sampled three times at stations 2, 3, 4, and 5 during the open-water season of 1973 (see map, page vi). Each time, samples for physical and chemical parameters were collected from the stations and from a number of depths at each station. During each visit, a single depth-integrated (4.6 m or near bottom to surface) sample was collected from the New York station and composited from the four Pennsylvania stations for phytoplankton identification and enumeration; and during the last visit in New York and the first visit in Pennsylvania, a single 18.9-liter depth-integrated sample was composited for algal assays. Also each time, a depth-integrated sample was collected from each of the stations for chlorophyll a analysis. The maximum depths sampled were 7.6 meters at station 1, 29.9 meters at station 2, 28.0 meters at station 3, 1.5 meters at station 4, and 21.6 meters at station 5.

The 1972 and 1973 lake sampling results are presented in full in Appendix D and are summarized in the following tables.

A. SUMMARY OF PHYSICAL AND CHEMICAL CHARACTERISTICS FOR ALLEGHENY RESERVOIR
STORET CODE 3641

PARAMETER	1ST SAMPLING (5/26/72) 1 SITES RANGE	MEAN	MEDIAN	2ND SAMPLING (7/27/72) 1 SITES RANGE	MEAN	MEDIAN	3RD SAMPLING (10/12/72) 1 SITES RANGE	MEAN	MEDIAN
TEMP (C)	11.9 - 19.1	16.3	17.8	20.3 - 23.3	22.1	22.8	10.4 - 10.6	10.5	10.5
DISS OXY (MG/L)	7.4 - 10.2	9.1	9.6	5.8 - 9.0	7.5	7.8	9.7 - 9.8	9.7	9.7
CNDCTVY (MCROMO)	120. - 165.	140.	160.	125. - 145.	138.	140.	180. - 190.	184.	182.
PH (STAND UNITS)	7.1 - 8.2	7.7	7.8	7.2 - 8.0	7.7	7.8	7.7 - 7.8	7.7	7.8
TOT ALK (MG/L)	19. - 39.	31.	36.	28. - 36.	34.	36.	35. - 37.	36.	35.
TOT P (MG/L)	0.016 - 0.036	0.029	0.034	0.010 - 0.015	0.013	0.014	0.044 - 0.066	0.055	0.053
DISS P (MG/L)	0.008 - 0.022	0.017	0.022	0.006 - 0.008	0.007	0.008	0.015 - 0.018	0.017	0.017
NO2+NO3 (MG/L)	0.280 - 0.320	0.293	0.280	0.210 - 0.250	0.227	0.225	0.400 - 0.460	0.430	0.430
AMMONIA (MG/L)	0.060 - 0.170	0.103	0.080	0.050 - 0.120	0.085	0.085	0.100 - 0.130	0.117	0.120
KJEL N (MG/L)	****** -**********			****** -**********			****** -**********		
INORG N (MG/L)	0.340 - 0.490	0.397	0.360	0.260 - 0.360	0.312	0.315	0.500 - 0.590	0.547	0.550
TOTAL N (MG/L)	****** -**********			****** -**********			****** -**********		
CHLRPYL A (UG/L)	11.1 - 11.1	11.1	11.1	16.7 - 16.7	16.7	16.7	10.0 - 10.0	10.0	10.0
SECCHI (METERS)	1.8 - 1.8	1.8	1.8	1.6 - 1.6	1.6	1.6	0.5 - 0.5	0.5	0.5

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A. SUMMARY OF PHYSICAL AND CHEMICAL CHARACTERISTICS FOR ALLEGHENY RESERVOIR
STORET CODE 3041

PARAMETER	1ST SAMPLING (6/26/73) 4 SITES RANGE	MEAN	MEDIAN	2ND SAMPLING (7/27/73) 4 SITES RANGE	MEAN	MEDIAN	3RD SAMPLING (10/ 5/73) 4 SITES RANGE	MEAN	MEDIAN
TEMP (C)	6.6 - 12.1	8.7	7.8	11.1 - 25.2	15.3	14.9	11.4 - 17.9	17.2	17.7
DISS OXY (MG/L)	10.4 - 11.2	11.1	11.0	1.2 - 8.3	6.1	6.3	2.4 - 8.0	5.7	5.9
CNDCTVY (MCROMO)	95. - 155.	112.	110.	85. - 187.	114.	110.	134. - 144.	138.	139.
PH (STAND UNITS)	8.2 - 8.5	8.4	8.3	6.4 - 7.8	7.1	6.9	6.6 - 7.2	6.8	6.8
TOT ALK (MG/L)	10. - 14.	12.	13.	21. - 37.	29.	29.	23. - 38.	31.	30.
TOT P (MG/L)	0.013 - 0.033	0.023	0.021	0.010 - 0.078	0.020	0.013	0.008 - 0.031	0.015	0.014
ORTHO P (MG/L)	0.004 - 0.013	0.008	0.006	0.004 - 0.008	0.005	0.005	0.003 - 0.010	0.005	0.004
NO2+NO3 (MG/L)	0.280 - 0.490	0.440	0.475	0.220 - 0.510	0.365	0.330	0.140 - 0.240	0.252	0.270
AMMONIA (MG/L)	0.023 - 0.071	0.031	0.030	0.030 - 0.150	0.055	0.050	0.030 - 0.230	0.079	0.060
KJEL N (MG/L)	0.300 - 0.430	0.312	0.300	0.200 - 1.200	0.477	0.300	0.300 - 0.600	0.437	0.400
INORG N (MG/L)	0.320 - 0.550	0.440	0.520	0.270 - 0.590	0.401	0.385	0.200 - 0.440	0.331	0.330
TOTAL N (MG/L)	0.480 - 0.830	0.751	0.788	0.490 - 1.490	0.824	0.690	0.340 - 0.850	0.584	0.675
CHLRPYL A (UG/L)	0.4 - 3.2	1.4	0.9	3.0 - 5.1	4.4	5.0	1.0 - 7.1	4.0	4.3
SECCHI (METERS)	1.0 - 1.2	1.1	1.0	0.3 - 4.0	3.1	3.0	1.1 - 3.1	2.4	2.3

B. Biological characteristics:

1. Phytoplankton -

a. Station 1 (1972) -

Sampling Date	Dominant Genera	Algal units per ml
05/25/72	1. Navicula	933
	2. Cryptomonas	289
	3. Fragilaria	239
	4. Synedra	174
	5. Cyclotella	101
	Other genera	527
	Total	2,263
07/27/72	1. Fragilaria	1,341
	2. Dinobryon	256
	3. Melosira	158
	4. Schroederia	136
	5. Anabaena	121
	Other genera	181
	Total	2,193
10/12/72	1. Anabaena	1,158
	2. Cyclotella	122
	3. Navicula	122
	4. Melosira	104
	5. Synedra	85
	Other genera	386
	Total	1,977

b. Stations 2, 3, 4, and 5 (1973) -

Sampling Date	Dominant Genera	Algal units per ml
04/20/73	1. Dinobryon	316
	2. Asterionella	173
	3. Synedra	90
	4. Cryptomonas	75
	5. Cyclotella	37
	Other genera	81
	Total	772
07/27/73	1. Flagellates	572
	2. Stephanodiscus	177
	3. Cryptomonas	158
	4. Dinobryon	158
	5. Synedra	158
	Other genera	847
	Total	2,070
10/05/73	1. Flagellates	447
	2. Aphanizomenon	429
	3. Fragilaria	71
	4. Coccoid cells	36
	Other genera	53
	Total	1,036

2. Chlorophyll a -

Sampling Date	Station Number	Chlorophyll a (µg/l)
05/25/72	01	11.1*
04/20/73	02	1.0
	03	0.4
	04	0.9
	05	3.2
07/27/72	01	16.7*
07/27/73	02	3.6
	03	4.6
	04	5.8
	05	5.5
10/12/72	01	10.0*
10/05/73	02	3.4
	03	3.0
	04	5.3
	05	7.7

C. Limiting Nutrient Study:

1. Station 1 (1972)--autoclaved, filtered, and nutrient spiked -

Spike (mg/l)	Ortho P Conc. (mg/l)	Inorganic N Conc. (mg/l)	Maximum yield (mg/l-dry wt.)
Control	0.034	0.566	10.4
0.010 P	0.044	0.566	11.9
0.020 P	0.054	0.566	11.9
0.050 P	0.084	0.566	13.4
0.050 P + 5.0 N	0.084	5.566	29.2
0.050 P + 10.0 N	0.084	10.566	28.9
10.0 N	0.034	10.566	11.3

* Because of instrumentation problems during the 1972 sampling, these values may be in error by plus or minus 20 percent.

2. Stations 2-5 (1973)--filtered and nutrient spiked -

Spike (mg/l)	Ortho P Conc. (mg/l)	Inorganic N Conc. (mg/l)	Maximum yield (mg/l-dry wt.)
Control	0.010	0.347	0.2
0.050 P	0.060	0.347	10.4
0.050 P + 1.0 N	0.060	1.347	17.6
1.0 N	0.010	1.347	0.2

3. Discussion -

The control yields of the assay alga, Selenastrum capricornutum, indicate that at the time the samples were taken, the potential primary productivity of Allegheny Reservoir was high at station 1 (in 1972) and moderate at stations 2-5 (in 1973). Also, in both assays the significant increase in yield with the addition of orthophosphorus indicates that both areas of the lake were limited by phosphorus at those times. Note that in both assays, the addition of nitrogen alone resulted in a yield which was not significantly different than the control.

The differences shown by the control yields at station 1 (north end of the lake) and at stations 2-5 (central and south end of lake) indicate the differences in availability of nutrients for primary production. Note that the sample orthophosphorus concentration was three times greater at station 1 (34 µg/l) than at stations 2-5 (10 µg/l).

The lake chemistry data further indicate that Allegheny Reservoir was limited by phosphorus. At all sampling times, the mean inorganic nitrogen to orthophosphorus (dissolved phosphorus at station 1) ratios were 23 to 1 or greater.

IV. NUTRIENT LOADINGS
(See Appendix E for data)

For the determination of nutrient loadings, the New York and Pennsylvania National Guards collected monthly near-surface grab samples from each of the tributary sites indicated on the map (page vi), except for the high runoff months of April and May in New York and February and March in Pennsylvania when two samples were collected. In New York, sampling was begun in November, 1972, and was completed in October, 1973. In Pennsylvania, sampling was begun in May, 1973, and was completed in April, 1974.

Through an interagency agreement, stream flow estimates for the year of sampling and a "normalized" or average year were provided by the New York and Pennsylvania District Offices of the U.S. Geological Survey for the tributary sites nearest the lake.

In this report, nutrient loads for sampled tributaries were determined by using a modification of a U.S. Geological Survey computer program for calculating stream loadings*. Nutrient loads shown are those measured minus point-source loads, if any.

Nutrient loads for unsampled "minor tributaries and immediate drainage" ("ZZ" of U.S.G.S.) were estimated using the means of the nutrient exports, in $kg/km^2/year$, at stations F-1, H-1, J-1, K-1, L-1, and M-1 and multiplying the means by the ZZ area in km^2.

* See Working Paper No. 175.

The operators of the Cuba, Olean, Portville, Salamanca, Kane, Bradford, Quaker State Oil, Zippo Manufacturing Co., and W. R. Case and Sons Cutlery wastewater treatment plants provided monthly effluent samples and corresponding flow data. The operator of the wastewater treatment plant at Allegany did not participate in the sampling program, and nutrient loads were estimated at 1.134 kg P and 3.401 kg N/capita/year. Nutrient loads in the untreated wastes of the town of Ellicottville were estimated at 1.587 kg P and 4.263 kg N/capita/year.

The operators of a number of other wastewater treatment plants provided monthly samples, and the data are included in Appendix C. The locations of these plants are shown on the map (page vi), but nutrient contributions were not identified in the loadings of Allegheny Reservoir because the plants are beyond the 40-kilometer limit of the Survey*. However, the nutrient contributions of these sources are included in the loads attributed to the Allegheny River at station D-1.

Estimates of nutrient contributions by wild ducks and geese were based on the following numbers of waterfowl using the Pennsylvania portion of Allegheny Reservoir as provided by the Pennsylvania Department of Environmental Resources (Ulanoski, 1975):

Summer resident ducks	100
Migratory ducks	1,500
Migratory geese	400

* See Working Paper No. 175.

In calculating the nutrient loads, the following assumptions were made:

1. Twice as many waterfowl utilize the New York portion of the reservoir (the main waterfowl populations occur there; Ulanoski, op. cit.).

2. Each wild duck contributes 0.45 kg total nitrogen and 0.20 kg total phosphorus per year (Paloumpis and Starrett, 1960).

3. Each wild goose contributes the same amount as one duck since geese typically feed in fields away from the lake several hours each day.

4. Summer or winter resident waterfowl are at the lake for six months of the year.

5. Migratory waterfowl spend a total of one month per year at the lake; i.e., 15 days during Spring migration and 15 days during Fall migration.

A. Waste Sources:

1. Known muncipal -

Name	Pop. Served	Treatment	Mean Flow (m^3/d)	Receiving Water
Cuba*	1,735	trickling filter	1,842.3	Oil Creek
Olean*	19,169	prim. clarifier	12,255.2	Allegheny River
Portville*	1,304	Imhoff	1,188.6	Dodge Creek
Salamanca*	7,877	act. sludge	4,542.5	Allegheny River
Allegany*	2,050	prim. clarifier	775.9***	Allegheny River
Bradford**	25,000	prim. clarifier	17,383.0	Tunungwant Creek
Kane** (Kinzua Rd.)	2,700	trickling filter	2,004.8	Hubert Run
Ellicottville*	955	none	361.5***	Great Valley Cr.

2. Known industrial -

Name	Product	Treatment	Mean Flow (m^3/d)	Receiving Water
Quaker State Oil	oil refinery	NaOH and Cl removal	23,693.5	Potato Creek
W. R. Case and Sons Mfg. Co.	cutlery mfg.	none	37.9	Tunungwant Creek
Zippo Mfg. Co.	plating	ppt of nickel & chrome; pH adjustment; oxidizing of cyanide waste	45.4	Tunungwant Creek

* Anonymous, 1971 (population shown is 1970 Census).
** Treatment plant questionnaires.
*** Estimated at 0.3785 m^3/capita/day.

B. Annual Total Phosphorus Loading - Average Year:

1. Inputs -

Source	kg P/yr	% of total
a. Tributaries (non-point load) -		
Sawmill Run	230	0.1
Bone Run	460	0.3
Cold Spring Creek	1,375	0.9
Allegheny River	106,950	66.2
Red House Brook	675	0.4
Quaker Run	400	0.2
Little Valley Creek	1,270	0.8
S. Br., State Line Run	120	0.1
Willow Creek	555	0.3
N. Br., Sugar Run	140	0.1
Sugar Run	260	0.2
Chappel Fork	195	0.1
Kinzua Creek	1,400	0.9
S. Br., Kinzua Creek	790	0.5
b. Minor tributaries & immediate drainage (non-point load) -	3,415	2.1
c. Known municipal STP's -		
Cuba	2,855	1.8
Olean	12,030	7.4
Portville	740	0.5
Salamanca	3,570	2.2
Allegany	2,325	1.4
Bradford	14,665	9.1
Kane	1,990	1.2
Ellicottville	1,515	0.9
d. Septic tanks* -	10	<0.1
e. Known industrial -		
Quaker State Oil Co.	2,740	1.7
W. R. Case and Sons Cutlery	5	<0.1
Zippo Mfg. Co.	5	<0.1
f. Wild ducks and geese -	125	0.1
g. Direct precipitation** -	855	0.5
Total	161,665	100.0

2. Outputs -

Lake outlet - Allegheny River 102,530

3. Net annual P accumulation - 59,135 kg.

* Estimate based on 5 campgrounds and 1 park; see Working Paper No. 175.
** See Working Paper No. 175.

C. Annual Total Nitrogen Loading - Average Year:

1. Inputs -

Source	kg N/ yr	% of total
a. Tributaries (non-point load) -		
Sawmill Run	6,805	0.3
Bone Run	8,470	0.3
Cold Spring Creek	22,065	0.9
Allegheny River	1,510,945	61.0
Red House Brook	23,195	0.9
Quaker Run	19,485	0.8
Little Valley Creek	86,860	3.5
S. Br., State Line Run	11,830	0.5
Willow Creek	30,030	1.2
N. Br., Sugar Run	17,330	0.7
Sugar Run	27,795	1.1
Chappel Fork	21,010	0.8
Kinzua Creek	111,730	4.5
S. Br., Kinzua Creek	64,525	2.6
b. Minor tributaries & immediate drainage (non-point load) -	271,820	11.0
c. Known municipal STP's -		
Cuba	5,990	0.2
Olean	64,550	2.6
Portville	6,835	0.3
Salamanca	14,120	0.6
Allegany	6,970	0.3
Bradford	74,495	3.0
Kane	6,840	0.3
Ellicottville	4,070	0.2
d. Septic tanks* -	385	<0.1
e. Known industrial -		
Quaker State Oil Co.	7,075	0.3
W. R. Case and Sons Cutlery	25	<0.1
Zippo Mfg. Co.	35	<0.1
f. Wild ducks and geese -	285	<0.1
g. Direct precipitation** -	52,650	2.1
Total	2,478,220	100.0

2. Outputs -

Lake outlet - Allegheny River 4,461,615

3. Net annual N loss - 1,983,395 kg.

* Estimate based on 5 campgrounds and 1 park; see Working Paper No. 175.
** See Working Paper No. 175.

D. Mean Annual Non-point Nutrient Export by Subdrainage Area:

Tributary	kg P/km^2/yr	kg N/km^2/yr
Sawmill Run	8	246
Bone Run	16	295
Cold Spring Creek	19	303
Allegheny River	25	355
Red House Brook	10	342
Quaker Run	6	287
Little Valley Creek	11	723
S. Br., State Line Run	10	1,011
Willow Creek	14	734
N. Br., Sugar Run	5	566
Sugar Run	4	447
Chappel Fork	4	377
Kinzua Creek	8	633
S. Br., Kinzua Creek	8	639

E. Yearly Loading Rates:

In the following table, the existing phosphorus loading rates are compared to those proposed by Vollenweider (Vollenweider and Dillon, 1974). Essentially, his "dangerous" rate is the rate at which the receiving water would become eutrophic or remain eutrophic; his "permissible" rate is that which would result in the receiving water remaining oligotrophic or becoming oligotrophic if morphometry permitted. A mesotrophic rate would be considered one between "dangerous" and "permissible".

Note that Vollenweider's model may not be applicable to water bodies with short hydraulic retention times.

	Total Phosphorus		Total Nitrogen	
	Total	Accumulated	Total	Accumulated
grams/m^2/yr	3.31	1.21	50.8	loss*

Vollenweider loading rates for phosphorus ($g/m^2/yr$) based on mean depth and mean hydraulic retention time of Allegheny Reservoir:

"Dangerous" (eutrophic rate)	1.56
"Permissible" (oligotrophic rate)	0.78

* There was an apparent loss of nitrogen during the sampling year. This may have been due to nitrogen fixation in the reservoir, solubilization of previously sedimented nitrogen, recharge with nitrogen-rich ground water, or unknown and unsampled point sources discharging directly to the reservoir. Whatever the cause, a similar loss of nitrogen has occurred at Shagawa Lake, Minnesota which has been intensively studied by EPA's National Eutrophication and Lake Restoration Branch (Malueg et al., 1975).

V. LITERATURE REVIEWED

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Paloumpis, A. A., and W. C. Starrett, 1960. An ecological study of benthic organisms in three Illinois River flood plain lakes. Amer. Midl. Nat., vol. 64, no. 2, pp. 406-435.

Ulanoski, James, 1975. Personal communication (lake morphometry; waterfowl numbers). PA Dept. of Env. Resources, Harrisburg.

Vollenweider, R. A., and P. J. Dillon, 1974. The application of the phosphorus loading concept to eutrophication research. Natl. Res. Council of Canada Publ. No. 13690, Canada Centre for Inland Waters, Burlington, Ontario.

VI. APPENDICES

APPENDIX A

CONVERSION FACTORS

CONVERSION FACTORS

Hectares x 2.471 = acres

Kilometers x 0.6214 = miles

Meters x 3.281 = feet

Cubic meters x 8.107×10^{-4} = acre/feet

Square kilometers x 0.3861 = square miles

Cubic meters/sec x 35.315 = cubic feet/sec

Centimeters x 0.3937 = inches

Kilograms x 2.205 = pounds

Kilograms/square kilometer x 5.711 = lbs/square mile

APPENDIX B

LAKE RANKINGS

LAKES RANKED BY INDEX NOS.

RANK	LAKE CODE	LAKE NAME	INDEX NO
1	4224	LAKE NAOMI	445
2	4220	BELTZVILLE DAM	423
3	4222	HARVEY'S LAKE	413
4	4228	STILLWATER LAKE	401
5	4227	POCONO LAKE	389
6	4223	INDIAN LAKE	388
7	3641	ALLEGHENY RESERVOIR	385
8	4229	LAKE WALLENPAUPACK	371
9	4221	CANADOHTA LAKE	369
10	4219	BEAVER RUN RESERVOIR	360
11	4204	CONNEAUT LAKE	307
12	4226	PINCHOT LAKE	256
13	4213	PYMATUNING RESERVOIR	206
14	4216	SHENANGO RIVER RESERVOIR	157
15	4225	ONTELAUNEE DAM	101
16	4201	BLANCHARD RESERVOIR	85
17	4207	GREENLANE DAM	53

PERCENT OF LAKES WITH HIGHER VALUES (NUMBER OF LAKES WITH HIGHER VALUES)

LAKE CODE	LAKE NAME	MEDIAN TOTAL P	MEDIAN INORG N	500-MEAN SEC	MEAN CHLORA	15-MIN DO	MEDIAN DISS P	INDEX NO
3641	ALLEGHENY RESERVOIR	56 (9)	38 (6)	63 (10)	100 (16)	69 (11)	59 (8)	385
4201	BLANCHARD RESERVOIR	13 (2)	13 (2)	25 (4)	31 (5)	3 (0)	0 (0)	85
4204	CONNEAUT LAKE	44 (7)	63 (10)	69 (11)	56 (9)	34 (5)	41 (6)	307
4207	GREENLANE DAM	6 (1)	6 (1)	19 (3)	13 (2)	3 (0)	6 (1)	53
4213	PYMATUNING RESERVOIR	0 (0)	72 (11)	6 (1)	0 (0)	100 (16)	28 (4)	206
4216	SHENANGO RIVER RESERVOIR	19 (3)	44 (7)	13 (2)	6 (1)	47 (7)	28 (4)	157
4219	BEAVER RUN RESERVOIR	94 (15)	19 (3)	88 (14)	81 (13)	19 (2)	59 (8)	360
4220	BELTZVILLE DAM	88 (14)	25 (4)	94 (15)	94 (15)	34 (5)	88 (13)	423
4221	CANADOHTA LAKE	50 (8)	97 (15)	56 (9)	19 (3)	59 (9)	88 (13)	369
4222	HARVEY'S LAKE	63 (10)	81 (13)	100 (16)	63 (10)	47 (7)	59 (8)	413
4223	INDIAN LAKE	100 (16)	31 (5)	75 (12)	75 (12)	19 (2)	88 (13)	388
4224	LAKE NAOMI	81 (13)	88 (14)	44 (7)	69 (11)	88 (14)	75 (12)	445
4225	ONTELAUNEE DAM	25 (4)	0 (0)	0 (0)	44 (7)	19 (2)	13 (2)	101
4226	PINCHOT LAKE	31 (5)	56 (9)	31 (5)	38 (6)	81 (13)	19 (3)	256
4227	POCONO LAKE	38 (6)	97 (15)	50 (8)	88 (14)	75 (12)	41 (6)	389
4228	STILLWATER LAKE	72 (11)	72 (11)	38 (6)	25 (4)	94 (15)	100 (16)	401
4229	LAKE WALLENPAUPACK	72 (11)	50 (8)	81 (13)	50 (8)	59 (9)	59 (8)	371

LAKE DATA TO BE USED IN RANKINGS

LAKE CODE	LAKE NAME	MEDIAN TOTAL P	MEDIAN INORG N	500-MEAN SEC	MEAN CHLORA	15-MIN DO	MEDIAN DISS P
3641	ALLEGHENY RESERVOIR	0.016	0.380	414.250	3.700	13.800	0.006
4201	BLANCHARD RESERVOIR	0.064	1.300	453.143	15.187	14.900	0.046
4204	CONNEAUT LAKE	0.023	0.185	402.000	7.567	14.600	0.007
4207	GREENLANE DAM	0.066	1.475	460.222	24.011	14.900	0.020
4213	PYMATUNING RESERVOIR	0.070	0.180	467.750	56.333	7.700	0.008
4216	SHENANGO RIVER RESERVOIR	0.058	0.340	463.555	26.800	14.500	0.008
4219	BEAVER RUN RESERVOIR	0.009	0.835	384.833	5.183	14.300	0.006
4220	BELTZVILLE DAM	0.010	0.815	362.444	4.856	14.600	0.005
4221	CANADOHTA LAKE	0.020	0.130	436.000	19.167	14.100	0.005
4222	HARVEY'S LAKE	0.015	0.160	338.000	5.967	14.500	0.006
4223	INDIAN LAKE	0.008	0.520	400.222	5.211	14.800	0.005
4224	LAKE NAOMI	0.014	0.135	443.333	5.533	8.000	0.005
4225	ONTELAUNEE DAM	0.040	2.150	470.667	11.783	14.800	0.011
4226	PINCHOT LAKE	0.027	0.245	453.000	13.950	11.500	0.008
4227	POCONO LAKE	0.024	0.130	438.800	4.980	13.200	0.007
4228	STILLWATER LAKE	0.015	0.180	449.000	18.233	7.900	0.004
4229	LAKE WALLENPAUPACK	0.015	0.250	394.583	9.617	14.100	0.006

APPENDIX C

TRIBUTARY FLOW DATA

TRIBUTARY FLOW INFORMATION FOR NEW YORK 2/24/75

LAKE CODE 3641 ALLEGHENY RESERVOIR

TOTAL DRAINAGE AREA OF LAKE(SQ KM) 5646.2

TRIBUTARY	SUB-DRAINAGE AREA(SQ KM)	NORMALIZED FLOWS(CMS) JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
3641A1	27.7	0.71	0.74	1.25	1.05	0.48	0.28	0.14	0.09	0.14	0.19	0.40	0.65	0.51
3641B1	28.7	0.71	0.74	1.25	1.05	0.48	0.28	0.14	0.09	0.14	0.19	0.40	0.65	0.51
3641C1	72.8	1.59	1.70	3.11	2.83	1.42	0.82	0.45	0.34	0.42	0.54	0.99	1.39	1.31
3641D1	4377.1	101.94	86.37	180.38	172.73	103.07	53.80	29.45	17.90	18.41	33.41	65.13	78.72	78.39
3641E1	67.9	1.78	1.84	3.20	2.69	1.22	0.71	0.34	0.24	0.37	0.48	1.05	1.64	1.24
3641F1	67.9	1.78	1.84	3.20	2.69	1.22	0.71	0.34	0.24	0.37	0.48	1.65	1.64	1.24
3641G1	120.2	3.11	3.11	5.38	4.53	2.10	1.25	0.59	0.40	0.62	0.85	1.78	2.83	2.21
3641Z2	1004.1	25.77	26.62	45.31	39.64	17.56	10.19	4.81	3.40	5.38	7.08	15.91	23.79	18.66

SUMMARY

TOTAL DRAINAGE AREA OF LAKE = 5646.2
SUM OF SUB-DRAINAGE AREAS = 5766.4
TOTAL FLOW IN = 1251.56
TOTAL FLOW OUT = 0.0

NOTE *** TRIB G1 IS INCLUDED IN D1 - OUTFLOW IS IN PENNSYLVANIA

MEAN MONTHLY FLOWS AND DAILY FLOWS(CMS)

TRIBUTARY	MONTH	YEAR	MEAN FLOW	DAY	FLOW	DAY	FLOW	DAY	FLOW
3641A1	11	72	0.96	4	1.08				
	12	72	1.16	2	0.45				
	1	73	0.68	6	0.93				
	2	73	0.62	3	1.44				
	3	73	1.27	3	0.62				
	4	73	0.68	8	1.33	21	0.31		
	5	73	0.54	6	0.79	19	0.40		
	6	73	0.25	3	0.42	23	0.12		
	8	73	0.09	4	0.08				
	9	73	0.07	8	0.11				
	10	73	0.10	5	0.10				
3641B1	11	72	0.96	4	1.08				
	12	72	1.16	2	0.45				
	1	73	0.68	6	0.93				
	2	73	0.62	3	1.44				
	3	73	1.27	3	0.62				
	4	73	0.68	8	1.33	21	0.31		
	5	73	0.54	6	0.79	19	0.40		
	6	73	0.25	3	0.42	23	0.12		
	8	73	0.09	4	0.08				
	9	73	0.07	8	0.11				
	10	73	0.10	5	0.10				

TRIBUTARY FLOW INFORMATION FOR NEW YORK 2/24/75

LAKE CODE 3641 ALLEGHENY RESERVOIR

MEAN MONTHLY FLOWS AND DAILY FLOWS(CMS)

TRIBUTARY	MONTH	YEAR	MEAN FLOW	DAY	FLOW	DAY	FLOW	DAY	FLOW
3641C1	11	72	2.41	4	3.96				
	12	72	2.83	2	1.16				
	1	73	1.56	6	1.64				
	2	73	1.53	3	7.08				
	3	73	3.11	3	3.11				
	4	73	2.24	8	2.78	21	1.08		
	5	73	1.56	6	1.76	19	1.05		
	6	73	0.93	3	1.56	23	0.74		
	8	73	0.37	4	0.37				
	9	73	0.40	8	0.51				
	10	73	0.48	5	0.71				
3641D1	11	72	124.59	4	172.73				
	12	72	192.55	2	84.95				
	1	73	96.28	6	141.58				
	2	73	86.37	3	311.49				
	3	73	176.98	3	53.80				
	4	73	97.69	8	150.08	21	61.16		
	5	73	129.12	6	84.38	19	138.19		
	6	73	93.73	3	135.92	23	47.01		
	8	73	18.12	4	15.29				
	9	73	18.69	7	45.31				
	10	73	22.65	5	15.01				
3641E1	11	72	2.55	4	2.83				
	12	72	2.83	2	1.16				
	1	73	1.70	6	2.38				
	2	73	1.59	3	3.68				
	3	73	3.26	3	1.59				
	4	73	1.76	8	3.40	21	0.79		
	5	73	1.36	6	1.98	19	0.99		
	6	73	0.62	3	1.08	23	0.31		
	8	73	0.23	4	0.20				
	9	73	0.19	8	0.28				
	10	73	0.25	5	0.26				
3641F1	11	72	2.55	4	2.83				
	12	72	2.83	2	1.16				
	1	73	1.70	6	2.38				
	2	73	1.59	3	3.68				
	3	73	3.26	3	1.59				
	4	73	1.76	8	3.40	21	0.79		
	5	73	1.36	6	1.98	19	0.99		
	6	73	0.62	3	1.08	23	0.31		
	8	73	0.23	4	0.20				
	9	73	0.19	8	0.28				
	10	73	0.25	5	0.26				

TRIBUTARY FLOW INFORMATION FOR NEW YORK 2/24/75

LAKE CODE 3641 ALLEGHENY RESERVOIR

MEAN MONTHLY FLOWS AND DAILY FLOWS(CMS)

TRIBUTARY	MONTH	YEAR	MEAN FLOW	DAY	FLOW	DAY	FLOW	DAY	FLOW
3641G1	11	72	4.25	4	4.81				
	12	72	5.07	2	1.98				
	1	73	2.97	6	4.25				
	2	73	2.66	3	6.23				
	3	73	5.38	3	2.69				
	4	73	2.83	8	5.66	21	1.33		
	5	73	2.32	6	3.40	12	4.25		
	6	73	1.10	3	1.90	23	0.54		
	8	73	0.40	4	0.34				
	9	73	0.31	8	0.48				
	10	73	0.42	5	0.45				
3641ZZ	12	72	42.48						
	1	73	24.64						
	2	73	22.94						
	3	73	45.31						
	4	73	25.77						
	5	73	19.54						
	6	73	9.06						
	8	73	3.40						
	9	73	2.78						
	10	73	3.68						

TRIBUTARY FLOW INFORMATION FOR NEW YORK 1/27/75

LAKE CODE 3641 ALLEGHENY RESERVOIR

TOTAL DRAINAGE AREA OF LAKE(SQ KM) 5646.2

TRIBUTARY	SUB-DRAINAGE AREA(SQ KM)	NORMALIZED FLOWS(CMS) JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
3641D6	5646.2	135.44	126.41	220.05	233.10	131.81	75.46	47.63	28.20	28.37	46.27	80.59	116.07	105.63
3641M1	11.7	0.25	0.27	0.57	0.68	0.37	0.25	0.09	0.03	0.08	0.15	0.31	0.40	0.29
3641J1	40.9	0.96	1.10	2.55	3.11	1.56	0.96	0.28	0.10	0.25	0.54	1.30	1.70	1.20
3641K1	30.6	0.34	0.37	0.99	1.27	0.59	0.34	0.10	0.03	0.08	0.18	0.48	0.65	0.45
3641L1	62.2	0.68	0.74	1.36	1.73	0.96	0.68	0.28	0.13	0.25	0.45	0.85	1.02	0.76
3641N1	176.6	2.80	3.11	5.38	6.23	3.96	2.83	1.30	0.62	1.10	1.87	3.40	3.96	3.04
3641P1	101.0	1.30	1.42	2.69	3.11	1.87	1.30	0.54	0.22	0.45	0.82	1.64	1.98	1.44
3641ZZ	523.2	12.54	11.72	20.39	21.58	12.20	6.99	4.42	2.61	2.63	4.28	7.48	10.76	9.79

SUMMARY

TOTAL DRAINAGE AREA OF LAKE = 5646.2
SUM OF SUB-DRAINAGE AREAS = 1001.8

TOTAL FLOW IN = 211.12
TOTAL FLOW OUT = 1269.41

MEAN MONTHLY FLOWS AND DAILY FLOWS(CMS)

TRIBUTARY	MONTH	YEAR	MEAN FLOW	DAY	FLOW	DAY	FLOW	DAY	FLOW
3641D6	5	73	139.60	19	120.35				
	6	73	79.29	9	127.43				
	7	73	26.93	14	18.12				
	8	73	30.62	11	41.34				
	9	73	49.55	8	44.74				
	10	73	75.61	13	70.79				
	11	73	97.69	10	114.68				
	12	73	117.80	8	116.10				
	1	74	230.30	12	167.64				
	2	74	175.65	10	247.21				
	3	74	179.25	9	214.92				
	4	74	182.36	20	240.69				
3641M1	5	73	0.37	19	0.27				
	6	73	0.28	9	0.34				
	7	73	0.13	14	0.08				
	8	73	0.22	11	0.05				
	9	73	0.07	8	0.05				
	10	73	0.11	13	0.03				
	11	73	0.31	10	0.20				
	12	73	0.31	8	0.21				
	1	74	0.31	12	0.16				
	2	74	0.31	10	0.26				
	3	74	0.71	9	2.24				
	4	74	0.85	20	0.57				

LAKE CODE 3641 ALLEGHENY RESERVOIR

MEAN MONTHLY FLOWS AND DAILY FLOWS(CMS)

TRIBUTARY	MONTH	YEAR	MEAN FLOW	DAY	FLOW	DAY	FLOW	DAY	FLOW
3641J1	5	73	1.56	19	1.08				
	6	73	1.16	9	1.33				
	7	73	0.42	14	0.24				
	8	73	0.79	11	0.13				
	9	73	0.21	8	0.15				
	10	73	0.37	13	0.08				
	11	73	1.33	10	0.71				
	12	73	2.32	8	0.76				
	1	74	2.32	12	0.57				
	2	74	1.27	10	1.02				
	3	74	3.11	9	12.74				
	4	74	3.96	20	2.55				
3641K1	5	73	0.59	19	0.40				
	6	73	0.42	9	0.51				
	7	73	0.14	14	0.08				
	8	73	0.28	11	0.04				
	9	73	0.07	8	0.05				
	10	73	0.12	13	0.02				
	11	73	0.51	10	0.25				
	12	73	0.91	8	0.27				
	1	74	0.91	12	0.20				
	2	74	0.48	10	0.37				
	3	74	1.36	9	5.66				
	4	74	1.76	20	1.02				
3641L1	5	73	0.96	19	0.74				
	6	73	0.76	9	0.85				
	7	73	0.37	14	0.24				
	8	73	0.57	11	0.16				
	9	73	0.22	8	0.17				
	10	73	0.34	13	0.11				
	11	73	0.85	10	0.54				
	12	73	1.27	8	0.57				
	1	74	1.27	12	0.45				
	2	74	0.82	10	0.68				
	3	74	1.64	9	4.53				
	4	74	1.98	20	1.36				
3641M1	5	73	0.76	19	0.59				
	6	73	0.62	9	0.68				
	7	73	0.31	14	0.21				
	8	73	0.45	11	0.14				
	9	73	0.19	8	0.15				
	10	73	0.28	13	0.10				
	11	73	0.66	10	0.45				
	12	73	0.99	8	0.45				
	1	74	0.99	12	0.37				
	2	74	0.65	10	0.57				
	3	74	1.30	9	3.40				
	4	74	1.53	20	1.05				

LAKE CODE 3641 ALLEGHENY RESERVOIR

MEAN MONTHLY FLOWS AND DAILY FLOWS(CMS)

TRIBUTARY	MONTH	YEAR	MEAN FLOW	DAY	FLOW	DAY	FLOW	DAY	FLOW
3641N1	5	73	3.96	19	2.97				
	6	73	3.11	9	3.40				
	7	73	1.04	14	1.13				
	8	73	2.46	11	0.74				
	9	73	0.99	8	0.82				
	10	73	1.50	13	0.54				
	11	73	3.40	10	2.29				
	12	73	5.10	8	2.38				
	1	74	5.10	12	1.93				
	2	74	3.40	10	2.83				
	3	74	6.51	9	16.42				
	4	74	7.65	20	5.38				
3641P1	5	73	1.87	19	1.39				
	6	73	1.50	9	1.67				
	7	73	0.71	14	0.45				
	8	73	1.10	11	0.28				
	9	73	0.40	8	0.31				
	10	73	0.62	13	0.20				
	11	73	1.67	10	1.33				
	12	73	2.55	8	1.08				
	1	74	2.55	12	0.83				
	2	74	1.59	10	1.39				
	3	74	3.40	9	9.63				
	4	74	3.96	20	2.69				
3641Z2	5	73	12.94	19	11.15				
	6	73	7.33	9	11.81				
	7	73	2.49	14	1.87				
	8	73	2.78	11	3.82				
	9	73	4.59	8	4.13				
	10	73	6.99	13	5.57				
	11	73	9.35	10	10.52				
	12	73	10.90	8	10.75				
	1	74	21.35	12	15.33				
	2	74	15.25	10	22.91				
	3	74	15.59	9	17.91				
	4	74	15.91	20	22.31				

APPENDIX D

PHYSICAL and CHEMICAL DATA

STORET RETRIEVAL DATE 75/02/25

364101
42 05 00.0 078 55 00.0
ALLEGHENY RESERVOIR
36 NEW YORK

11 PALES
0

2111202
0630 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00630 NO2&NO3 N-TOTAL MG/L	00610 NH3-N TOTAL MG/L	00665 PHOS-TOT MG/L P	00666 PHOS-DIS MG/L P
72/05/26	15	36 0000	19.1	10.2	72	165	8.20	39	0.280	0.060	0.034	0.022
	15	36 0010	17.8	9.6		160	7.80	36	0.280	0.080	0.038	0.022
	15	36 0020	11.9	7.4		120	7.10	19	0.320	0.170	0.016	0.008
72/07/27	18	00 0000			63	140	8.00	36	0.210	0.050	0.015	0.008
	18	00 0004	23.3	9.0		140	8.00	35	0.220	0.060	0.015	0.008
	18	00 0015	22.8	7.8		145	7.70	36	0.250	0.110	0.014	0.008
	18	00 0025	20.3	5.8		125	7.20	28	0.230	0.120	0.018	0.006
72/10/12	14	05 0000			19	180	7.75	35	0.400	0.100	0.068	0.015
	14	05 0004	10.6	9.8		182	7.75	35	0.430	0.120	0.044	0.016
	14	05 0008	10.4	9.7		190	7.68	37	0.460	0.130	0.053	0.017

36A

DATE FROM TO	TIME OF DAY	DEPTH FEET	32217 CHLRPHYL A UG/L
72/05/26	15	36 0000	11.1J
72/07/27	18	00 0000	16.7J
72/10/12	14	05 0000	10.0J

J VALUE KNOWN TO BE IN ERROR

STORET RETRIEVAL DATE 75/02/25

364102
41 50 15.0 078 59 56.0
ALLEGHENY RESERVOIR
36 NEW YORK

11EPALES
3

2111202
0100 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
73/04/20	10 10	0000	8.4		38	100	8.60	14	0.050	0.400	0.470	0.007
	10 10	0015	7.9	11.1		95	8.30	15	0.060	0.300	0.490	0.007
	10 10	0045	7.2	11.0		100	8.50	13	0.060	0.300	0.480	0.007
	10 10	0075	6.8	11.0		95	8.30	13	0.070	0.300	0.490	0.008
	10 10	0095	6.7	11.1		95	8.20	13	0.060	0.300	0.480	0.008
73/07/27	10 30	0000	21.3		180	122	7.50	30	0.060	1.200	0.290	0.005
	10 30	0005	20.9	7.7		120	7.30	28	0.040	0.700	0.290	0.005
	10 30	0015	19.7	6.4		117	7.30	28	0.030	0.500	0.290	0.004
	10 30	0030	18.2	6.6		109	6.90	27	0.030	0.500	0.340	0.004
	10 30	0050	15.8	6.0		98	6.80	25	0.040	0.500	0.400	0.005
	10 30	0070	14.2	5.2		93	6.60	23	0.030	0.400	0.440	0.006
	10 30	0098	11.3	4.2		85	6.60	23	0.050	0.400	0.510	0.006
73/10/05	10 10	0000	17.7	4.4	100	137	7.20	32	0.070	0.500	0.280	0.006
	10 10	0020	17.7	5.6		137	7.10	33	0.060	0.400	0.270	0.004
	10 10	0030	17.7	5.8		137	7.00	34	0.060	0.400	0.270	0.004
	10 10	0040	17.7	5.4		137	6.70	35	0.060	0.300	0.270	0.005
	10 10	0060	17.6	4.4		139	6.70	36	0.080	0.400	0.290	0.004
	10 10	0077	17.5	4.2		145	6.60	30	0.100	0.400	0.280	0.004
	10 10	0094	16.7	2.4		171	6.70	38	0.230	0.600	0.260	0.007

STORET RETRIEVAL DATE 75/02/25

394102
+1 50 13.0 078 37 39.1
ALLEGHENY RESERVOIR
36 NEW YORK

11EPALES 21112,2
3 0100 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L
73/04/20	10 10	0000	0.026	1.0
	10 10	0015	0.021	
	10 10	0045	0.020	
	10 10	0075	0.022	
	10 10	0095	0.023	
73/07/27	10 30	0000	0.016	3.6
	10 30	0005	0.012	
	10 30	0015	0.012	
	10 30	0030	0.010	
	10 30	0050	0.010	
	10 30	0070	0.011	
	10 30	0098	0.016	
73/10/05	10 10	0000	0.018	3.4
	10 10	0020	0.015	
	10 10	0030	0.014	
	10 10	0040	0.013	
	10 10	0060	0.014	
	10 10	0077	0.015	
	10 10	0094	0.031	

STORET RETRIEVAL DATE 75/02/25

3041V3
41 51 32.0 073 57 35.0
ALLEGHENY RESERVOIR
36 NEW YORK

11EMALES
3

2111202
6044 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
73/04/20	11 00	0000	9.9		48	100	8.50	16K	0.030	0.300	0.420	0.006
	11 00	0015	6.8	11.3		98	8.30	13	0.060	0.300	0.480	0.007
	11 00	0040	6.7	11.0		100	8.50	13	0.060	0.300	0.490	0.009
	11 00	0080	6.6	11.0		95	8.40	11	0.060	0.400	0.480	0.009
73/07/27	11 15	0000	22.6		144	128	7.60	29	0.040	0.700	0.240	0.004
	11 15	0005	22.5	8.4		128	7.40	27	0.040	0.500	0.250	0.005
	11 15	0015	21.2	8.1		122	7.40	28	0.040	0.600	0.270	0.005
	11 15	0030	17.9	6.5		108	7.40	28	0.080	0.600	0.380	0.005
	11 15	0050	16.6	6.2		104	6.70	31	0.050	0.600	0.390	0.008
	11 15	0070	13.9	4.5		92	6.50	29	0.040	0.600	0.450	0.005
	11 15	0092	11.1	3.7		85	6.40	30	0.050	0.500	0.510	0.006
73/10/05	12 35	0000	17.8	6.4	122	134	7.00	28	0.060	0.400	0.270	0.004
	12 35	0025	17.8	6.0		135	6.80	27	0.050	0.300	0.270	0.003
	12 35	0050	17.8	6.0		135	6.70	27	0.060	0.400	0.270	0.003
	12 35	0080	11.4	4.2		139	6.80	29	0.080	0.400	0.290	0.003

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L
73/04/20	11 00	0000	0.015	0.4
	11 00	0015	0.022	
	11 00	0040	0.021	
	11 00	0080	0.021	
73/07/27	11 15	0000	0.012	4.6
	11 15	0005	0.011	
	11 15	0015	0.011	
	11 15	0030	0.023	
	11 15	0050	0.010	
	11 15	0070	0.014	
	11 15	0092	0.023	
73/10/05	12 35	0000	0.010	3.0
	12 35	0025	0.009	
	12 35	0050	0.008	
	12 35	0080	0.010	

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 75/02/25

364104
41 46 20.0 078 53 00.0
ALLEGHENY RESERVOIR
36 NEW YORK

11EPALES 2111202
3 0008 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
73/04/20	11 30	0000	12.1		40	165	8.30	10K	0.020	0.200	0.280	0.009
	11 30	0004	11.6	10.4		160	8.20	10K	0.020	0.300	0.280	0.013
73/07/27	13 15	0000	21.1		18	186	7.00	26	0.080	0.400	0.310	0.007
	13 15	0005	19.0	7.2		187	6.80	21	0.080	0.400	0.420	0.008
73/10/05	11 00	0000	17.2	7.8	42	194	6.90	24	0.070	0.600	0.150	0.008
	11 00	0005	17.1	8.0		194	6.70	23	0.060	0.400	0.140	0.007

40A

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L
73/04/20	11 30	0000	0.016	0.4
	11 30	0004	0.013	
73/07/27	13 15	0000	0.044	5.8
	13 15	0005	0.078	
73/10/05	11 00	0000	0.025	5.3
	11 00	0005	0.020	

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 75/02/25

364165
41 37 27.0 073 55 30.0
ALLEGHENY RESERVOIR
36 NEW YORK

11EMALES 21112U2
3 0070 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
73/04/20	13	20 0000	11.8		40	110	8.30	16	0.050	0.300	0.450	0.007
	13	20 0004	11.3	11.6		140	8.40	17	0.040	0.400	0.450	0.008
	13	20 0015	10.2	11.8		105	8.40	15	0.040	0.300	0.480	0.004
	13	20 0045	7.8	11.4		120	8.60	15	0.060	0.300	0.460	0.009
	13	20 0065	7.6	10.7		115	8.20	14	0.070	0.300	0.440	0.009
73/07/27	13	45 0000	23.2		139	140	7.80	37	0.060	0.300	0.220	0.005
	13	45 0005	23.2	8.5		140	7.70	36	0.050	0.200K	0.250	0.005
	13	45 0015	23.1	8.4		138	7.60	36	0.040	0.200K	0.230	0.004
	13	45 0030	18.8	5.6		114	6.90	33	0.060	0.200K	0.320	0.005
	13	45 0050	16.3	5.6		102	6.70	30	0.060	0.200K	0.390	0.006
	13	45 0071	14.6	1.2		99	6.50	33	0.150	0.300	0.430	0.008
73/10/05	13	15 0000	17.9	7.2	118	141	6.90	30	0.060	0.400	0.250	0.005
	13	15 0025	17.8	7.2		141	6.70	30	0.050	0.500	0.240	0.004
	13	15 0054	17.5	6.8		145	6.90	33	0.110	0.600	0.230	0.010

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L
73/04/20	13	20 0000	0.033	3.2
	13	20 0004	0.031	
	13	20 0015	0.021	
	13	20 0045	0.024	
	13	20 0065	0.033	
73/07/27	13	45 0000	0.010	5.5
	13	45 0005	0.010	
	13	45 0015	0.015	
	13	45 0030	0.013	
	13	45 0050	0.012	
	13	45 0071	0.049	
73/10/05	13	15 0000	0.014	7.7
	13	15 0025	0.015	
	13	15 0054	0.030	

K VALUE KNOWN TO BE
LESS THAN INDICATED

APPENDIX E

TRIBUTARY and WASTEWATER TREATMENT PLANT DATA

STORET RETRIEVAL DATE 75/10/16

3641A1 LS3641A1
41 30 00.0 078 57 30.0
SAWMILL RUN
36 CATTARAUGUS CO
T/ALLEGHENY RESERVOIR
WEST BANK PERIMETER RD BRDG
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
72/11/04	12 00		0.182	0.100K	0.038	0.005K	0.011
72/12/02	11 55		0.190	0.170	0.010	0.005K	0.010
73/01/06	10 50		0.231	0.200	0.025	0.005K	0.007
73/02/03	14 00		0.315	0.110	0.014	0.005K	0.025
73/03/03	10 15		0.280	0.160	0.033	0.007	0.015
73/04/08	11 05		0.252	0.100K	0.018	0.008	0.010
73/04/21	11 00		0.138	0.190	0.019	0.005K	0.010
73/05/06	08 15		0.154	0.340	0.015	0.005K	0.010
73/05/19	10 30		1.000		0.022	0.006	0.025
73/06/03	19 00		0.098	0.420	0.024	0.005K	0.010
73/06/23	11 35		0.198	0.260	0.035	0.020	0.025
73/09/08	10 20		0.061	0.370	0.040	0.005K	0.020
73/10/05	14 25		0.340	0.330	0.030	0.007	

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 75/10/16

364181 LS364181
42 02 00.0 078 56 30.0
BONE RUN
36 CATTARAUGUS CO
T/ALLEGHENEY RESERVOIR
WEST BANK PERIMETER RD BRDG
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
72/11/04	11 47		0.140	0.100K	0.073	0.005K	0.015
72/12/02	11 50		0.450	0.250	0.048	0.014	0.045
73/01/06	11 00		0.160	0.120	0.020	0.005K	0.017
73/02/03	13 35		0.280	0.100K	0.017	0.005K	0.035
73/03/03	10 05		0.250	0.500	0.023	0.006	0.025
73/04/08	11 10		0.150	0.120	0.009	0.005K	0.020
73/04/21	10 55		0.126	0.260	0.012	0.005K	0.030
73/05/06	08 30		0.100	0.360	0.014	0.005K	0.025
73/05/19	10 20		0.185	0.310	0.019	0.008	0.035
73/06/03	18 38		0.010K	0.380	0.009	0.010	0.015
73/06/23	11 45		0.250	1.260	0.056	0.005K	0.025
73/09/08	10 28		0.046	0.400	0.027	0.005K	0.025
73/10/05	14 20		0.260	0.420	0.044	0.008	0.075

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 75/10/16

3641C1 LS3641C1
42 06 30.0 078 52 30.0
COLD SPRING CREEK
36 CATTARAUGUS CO
T/ALLEGHENEY RESERVOIR
HWY 17 BRDG
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
72/11/04	12 19		0.360	0.250	0.052	0.007	0.028
72/12/02	10 05		0.480	0.160	0.011	0.006	0.019
73/01/06	11 02		0.510	0.100K	0.005K	0.005K	0.014
73/02/03	12 30		0.480	0.220	0.018	0.008	0.055
73/03/03	09 05		0.470	0.100K	0.038	0.005K	0.015
73/04/08	11 22		0.360	0.150	0.005K	0.009	0.010
73/04/21	11 55		0.120	0.290	0.016	0.013	0.040
73/05/06	08 45		0.120	0.180	0.008	0.005K	0.010
73/05/19	11 00		0.052	0.160	0.005K	0.005K	0.010
73/06/03	19 35		0.029	0.440	0.007	0.014	0.025
73/06/23	12 00		0.038	0.250	0.009	0.017	0.025
73/10/03	14 40		0.138	0.910	0.034	0.044	0.145

45A

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 75/10/16

3641D1 LS3641D1
42 07 00.0 078 48 00.0
ALLEGHENEY RIVER
36 CATTARAUGUS CO
I/ALLEGHENEY RESERVOIR
HWY 17 BRDG BELO SALAMANACA STP
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
72/11/04	12 35		0.350	0.700	0.100	0.016	0.095
72/12/02	12 20		0.490	0.250	0.075	0.020	0.051
73/01/06	11 20		0.460	0.150	0.042	0.013	0.044
73/02/03	11 35		0.049	0.100K	0.017	0.005K	0.025
73/03/03	08 50		0.600	0.170	0.100	0.018	0.050
73/04/08	11 40		0.390	0.270	0.024	0.007	0.040
73/04/21	11 30		0.294	0.330	0.016	0.015	0.042
73/05/06	09 00		0.280	0.270	0.015	0.014	0.037
73/05/19	10 50		0.014	0.180	0.005K	0.005K	0.010
73/06/03	19 30		0.300	0.330	0.011	0.021	0.055
73/06/23	10 35		0.660	0.905	0.082	0.032	0.170
73/09/07	10 45		0.460	0.480	0.051	0.017	0.100
73/10/05	14 55		0.650	0.260	0.032	0.022	0.067

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 75/10/16

3641D2 LS3641D2
42 09 30.0 078 42 00.0
ALLEGHENEY RIVER
36 CATTARAUGUS CO
T/ALLEGHENEY RESERVOIR
MAIN ST BRDG ABOV SALAMANACA STP
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
72/12/02	10 30		0.470	0.420	0.099	0.020	0.056
73/01/06	10 35		0.450	0.200	0.058	0.011	0.042
73/02/03	10 55		0.410	1.000	0.077	0.020	
73/03/03	10 30		0.640	0.290	0.120	0.027	0.060
73/04/08	10 35		0.370	0.260	0.027	0.006	0.045
73/04/21	09 00		0.310	0.420	0.022	0.015	0.045
73/05/06	10 55		0.273	0.370	0.031	0.020	0.055
73/05/12	09 30		0.252	0.440	0.036	0.013	0.085
73/06/03	09 55		0.270	0.460	0.030	0.023	0.065
73/06/23	10 30		0.560	0.930	0.092	0.040	0.160
73/09/07	08 35		0.370	0.670	0.091	0.017	0.150
73/10/05	15 15		0.510	0.350	0.077	0.020	0.080

STORET RETRIEVAL DATE 75/10/16

364103 LS364103
42 05 30.0 078 30 00.0
ALLEGHENEY RIVER
36 CATTARAUGUS CO
T/ALLEGHENEY RESERVOIR
BRDG W END OF ALLEGHENEY ABOVE STP
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
72/12/02	09 45		0.430	0.460	0.054	0.011	0.031
73/01/06	09 50		0.430	0.100K	0.024	0.008	0.028
73/02/03	10 15		0.399	0.940	0.060	0.019	0.250
73/03/03	09 50		0.490	0.180	0.072	0.017	0.040
73/04/08	10 10		0.350	0.210	0.018	0.005K	0.030
73/04/21	10 00		0.198	0.275	0.025	0.009	0.030
73/05/06	10 15		0.210	0.230	0.020	0.010	0.025
73/05/12	08 45		0.231	0.350	0.021	0.009	0.053
73/06/03	09 15		0.200	0.290	0.017	0.017	0.035
73/06/23	09 50		0.450	0.840	0.080	0.024	0.110
73/09/07	08 00		0.378	0.765	0.150	0.014	0.115
73/10/05	16 00		0.290	0.370	0.160	0.020	0.060

48

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 75/10/16

364104 LS364104
42 05 00.0 078 34 30.0
ALLEGHENEY RIVER
36 CATTARAUGUS CO
T/ALLEGHENEY RIVER
BRDG SE OF VANDALIA BELO ALLEGHENEY STP
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO26NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
72/12/02	09 35		0.500	0.310	0.084	0.015	0.040
73/01/06	10 15		0.490	0.200	0.066	0.010	0.032
73/02/03	10 35		0.410	1.890	0.077	0.019	0.260
73/03/03	10 10		0.580	0.380	0.160	0.024	0.070
73/04/08	10 20		0.390	0.230	0.034	0.005K	0.030
73/04/21	08 40		0.336	0.350	0.058	0.014	0.040
73/05/06	10 30		0.290	0.360	0.054	0.014	0.035
73/05/12	09 00		0.250	0.370	0.044	0.013	0.060
73/06/03	09 25		0.200	1.000	0.017	0.021	0.055
73/06/23	10 05		0.560	1.300	0.110	0.029	0.145
73/09/07	08 15		0.460	0.770	0.138	0.015	0.135
73/10/05	15 45		0.540	0.580	0.365	0.035	0.100

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 75/10/16

3641D5 LS3641D5
42 04 00.0 078 25 30.0
ALLEGHENEY RIVER
36 CATTARAUGUS CO
T/ALLEGHENEY RESERVOIR
BRDG IN OLEAN ABOV STP
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
72/11/04	09 00		0.308	0.600	0.064	0.011	0.100
72/12/02	09 05		0.390	0.180	0.022	0.009	0.027
73/01/06	09 30		0.460	0.170	0.017	0.008	0.029
73/02/03	10 00		0.470	0.740	0.052	0.022	0.185
73/03/03	09 00		0.410	0.370	0.062	0.011	0.045
73/04/08	09 55		0.315	0.190	0.005K	0.005K	0.020
73/04/21			0.294	0.250	0.010	0.010	0.035
73/05/06	10 00		0.250	0.205	0.011	0.011	0.025
73/05/12	08 30		0.210	0.340	0.016	0.009	0.055
73/06/03	09 00		0.189	0.480	0.010	0.014	0.037
73/06/23	09 30		0.510	1.700	0.080	0.019	0.105
73/09/07	09 45		0.310	0.540	0.042	0.007	0.090
73/10/05	16 10		0.154	0.270	0.048	0.013	0.050

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 75/10/16

364106
41 50 17.0 079 00 15.0
ALLEGHENY RIVER
36 7.5 CLARENDON
O/ALLEGHENY RES
BANK BELO SPILLWAY OF KINZUA DAM
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/05/19	14	25	0.350	0.820	0.037	0.005K	0.015
73/06/10	10	30	0.294	3.300	0.205	0.005K	0.020
73/08/05	11	30	0.210	0.420	0.014	0.005K	0.040
73/09/15	10	00	0.220	0.670	0.150	0.007	0.025
73/10/08	12	00	0.230	1.200	0.168	0.007	0.020
73/11/09	14	30	0.352	0.400	0.080	0.044	0.060
73/12/14	13	00	0.470	0.500	0.030	0.008	0.015
74/01/06	07	00	0.520	0.700	0.050	0.005	0.030
74/02/10	12	00	1.520	0.400	0.060	0.005	0.020
74/02/24	11	00	0.620	0.900	0.160	0.010	0.050
74/03/10	12	00	0.600	0.700	0.155	0.010	0.045
74/03/25	12	30	0.552	0.500	0.100	0.005	0.035
74/04/17	15	00	0.480	0.300	0.040	0.010	0.030

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 75/10/16

3641E1 LS3641E1
42 06 30.0 078 45 30.0
RED HOUSE BROOK
36 CATTARAUGUS CO
T/ALLEGHENEY RESERVOIR
SOUTHERN TIER EXPRESSWAY
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
72/11/04	10 57		0.180	0.400	0.037	0.005K	0.022
72/12/02	10 55		0.210	0.100K	0.009	0.005K	0.010
73/01/06	10 10		0.310	0.170	0.019	0.005K	0.011
73/02/03	12 00		0.315	0.210	0.033	0.005K	0.025
73/03/03	09 25		0.350	0.150	0.016	0.005K	0.010
73/04/08	10 30		0.320	0.110	0.005K	0.005K	0.010
73/04/21	11 40		0.220	0.810	0.044	0.005K	0.010
73/05/06	07 00		0.200	0.140	0.009	0.005K	0.010
73/05/19	09 30		0.350	0.205	0.008	0.007	0.010
73/06/03	06 00		0.120	0.170	0.006	0.008	0.015
73/06/23	10 55		0.105	1.400	0.042	0.018	0.020
73/09/08	09 37		0.030	0.420	0.007	0.005K	0.025
73/10/05	13 40		0.039	0.490	0.036	0.006	0.045

52A

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 75/10/16

3641F1 LS3641F1
42 04 30.0 078 52 30.0
QUAKER RUN
36 CATTARAUGUS CO
T/ALLEGHENEY RESERVOIR
EAST BANK PERIMETER RD BRDG
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
72/11/04	11 16		0.090	0.320	0.066	0.005K	0.015
72/12/02	11 05		0.790	0.150	0.010	0.005K	0.011
73/01/06	10 25		0.210	0.420	0.014	0.005K	0.011
73/02/03	13 05		0.231	0.100K	0.011	0.005K	0.010
73/03/03	09 45		0.280	0.420	0.038	0.005K	0.005K
73/04/08	10 45		0.250	0.170	0.005K	0.005K	0.005K
73/04/21	10 30		0.210	0.160	0.016	0.005K	0.010
73/05/06	07 20		0.176	0.250	0.016	0.005K	0.005K
73/05/19	09 40		0.240	0.170	0.010	0.006	0.010
73/06/0[illegible]	06 15		0.130	0.750	0.007	0.008	0.010
73/06/23	11 05		0.130	0.200	0.050	0.005K	0.010
73/09/08	09 50		0.034	0.200	0.037	0.005K	0.010
73/10/05	13 55		0.020	0.220	0.100	0.005K	0.020

53A

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 75/10/16

3641G1 LS3641G1
42 08 30.0 078 45 00.0
LITTLE VALLEY CREEK
36 CATTARAUGUS CO
T/ALLEGHENEY RESERVOIR
HWY 353 BRDG
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
72/11/04	10 36		0.641	0.730	0.063	0.006	0.032
72/12/02	10 40		1.240	0.110	0.006	0.020	0.020
73/01/06	10 45		0.710	0.100K	0.005K	0.005K	0.015
73/02/03	11 15		0.640	0.140	0.013	0.007	0.045
73/03/03	11 00		1.100	0.200	0.021	0.005K	0.020
73/04/08	10 45		0.560	0.110	0.013	0.005K	0.005K
73/04/21	09 15		0.650	0.140	0.034	0.005K	0.010
73/05/06	11 15		0.500	0.210	0.014	0.005K	0.010
73/05/12	09 30		0.470	0.160	0.005K	0.005K	0.020
73/06/03	10 41		0.440	0.690	0.014	0.007	0.020
73/06/23	10 45		0.590	0.920	0.072	0.034	0.155
73/08/04	10 30		2.020	0.540	0.012	0.005K	0.025
73/09/08	08 45		2.100	0.190	0.017	0.005K	0.015
73/10/05	13 30		1.860	0.140	0.036	0.005K	0.010

S-1A

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 75/02/03

3641M1
41 59 48.0 078 59 05.0
S BRANCH ST LINE RUN
36 7.5 CORNPLANTER
T/ALLEGHENY RES
RD 61037 BRDG S OF PA-NY BORDER
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/05/19	13 30		0.340	2.200	0.110	0.005K	0.005K
73/06/10	09 30		0.400	0.200	0.042	0.005K	0.010
73/08/05	10 30		0.315	0.520	0.021	0.010	0.010
73/09/15	11 00		0.357		0.009	0.005K	0.020
73/10/08	11 00		0.290	0.850	0.040	0.005K	0.005K
73/11/09	12 30		0.610	0.750	0.028	0.005K	0.030
73/12/12	17 00		0.540	1.000	0.352	0.005K	0.005
74/01/06	06 30		0.720	0.600	0.030	0.005K	0.005K
74/02/24	10 00		1.010	0.600	0.135	0.010	0.025
74/03/10	11 30		0.880	0.400	0.026	0.005K	0.015
74/03/25	11 00		0.660	0.800	0.040	0.005	0.010
74/04/17	15 50		0.552	0.100	0.030	0.005K	0.010

K VALUE KNOWN TO BE LESS THAN INDICATED

STORET RETRIEVAL DATE 75/02/03

3641J1
41 59 00.0 078 54 00.0
WILLOW CREEK
36 7.5 CORNPLANTER
T/ALLEGHENY RES
HWY 346 BRDG .8 MI WNW OF JCT HWY 321
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/05/19	12 05		0.130	1.260	0.054	0.005K	0.010
73/06/10	09 00		0.168	0.290	0.015	0.005K	0.015
73/08/05	10 00		0.105	0.120	0.010	0.007	0.010
73/09/15	12 00		0.030	0.260	0.006	0.005K	0.010
73/10/08	10 00		0.015	0.550	0.017	0.005K	0.005K
73/11/09	11 30		0.252	0.250	0.044	0.005K	0.035
73/12/14	18 00		0.240	0.100K	0.016	0.005K	0.005
74/01/06	06 00		0.450	0.800	0.030	0.005K	0.005
74/02/10	10 00		0.440	0.600	0.020	0.005K	0.005K
74/02/24	09 00		0.510	0.360	0.360	0.010	0.035
74/03/10	11 00		0.480	0.600	0.040	0.010	0.020
74/03/25	11 00		0.384	1.100	0.040	0.005	0.025
74/04/17	15 30		0.380	0.300	0.130	0.005K	0.015

K VALUE KNOWN TO BE LESS THAN INDICATED

STORET RETRIEVAL DATE 75/02/03

3641K1
41 53 30.0 078 53 16.0
N BRANCH SUGAR RUN
36 7.5 CUMBPLANTER
T/ALLEGHENY RES
HWY 321 AT MOUTH OF STREAM
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/05/19	11 40		0.200	0.120	0.022	0.005K	0.005K
73/06/10	10 50		0.280	1.640	0.058	0.005K	0.015
73/08/05	20 10		0.210	1.660	0.084	0.006	0.015
73/09/04	19 30		0.138	1.200	0.038	0.006	0.015
73/10/11	17 45		0.010K	1.200	0.032	0.005K	0.005K
73/11/10	13 40		0.352	0.525	0.020	0.005K	0.005K
73/12/14	16 00		0.336	0.700	0.040	0.005K	0.005K
74/01/15	17 00		0.480	0.750	0.040	0.005K	0.005
74/02/10	13 00		0.520	1.300	0.035	0.005K	0.005K
74/02/24	10 58		0.610	0.400	0.060	0.010	0.025
74/03/09	13 40		1.200	0.300	0.030	0.010	0.010
74/03/30	12 00		0.352	0.500	0.025	0.005K	0.010
74/04/17	18 40		0.470	0.100	0.035	0.005K	0.010

K VALUE KNOWN TO BE LESS THAN INDICATED

57A

STORET RETRIEVAL DATE 75/02/03

3641L1
41 53 00.0 078 52 45.0
SUGAR RUN
36 7.5 CORNPLANTER
T/ALLEGHENY RES
RD XING JUST S OF HWY 321
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/05/19	11 30		0.378	0.100K	0.011	0.005K	0.005K
73/08/05	21 00		0.220	0.420	0.030	0.005K	0.010
73/09/08	19 20		0.115	0.160	0.062	0.005K	0.010
73/10/11	17 30		0.011	0.300	0.038	0.005K	0.005K
73/11/10	13 30		0.540	0.600	0.028	0.005K	0.025
73/12/14	16 15		0.510	1.200	0.028	0.005K	0.005K
74/01/06	15 25		0.740	1.100	0.035	0.005K	0.005
74/02/10	12 50		0.672	0.900	0.045	0.005K	0.005K
74/02/24	10 50		0.900	0.700	0.035	0.010	0.025
74/03/09	13 50		1.010	0.300	0.020	0.010	0.010
74/03/30	12 15		0.590	1.400	0.055	0.005	0.010
74/04/17	19 10		0.670	0.300	0.025	0.005K	0.015

K VALUE KNOWN TO BE LESS THAN INDICATED

STORET RETRIEVAL DATE 75/02/03

3641M1
41 48 50.0 078 52 10.0
CHAPPEL FORK
36 MCKEAN CO MAP
T/ALLEGHENY RES
BANK OFF RD 42003 .3 MI W JCT RD T558
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/05/19	10 45		0.457	0.540	0.029	0.005K	0.005K
73/06/10	10 05		0.470	0.660	0.074	0.005K	0.010
73/08/08	20 30		0.378	0.285	0.017	0.005	0.010
73/09/08	19 05		0.200	0.180	0.040	0.005K	0.010
73/10/11	17 15		0.087	1.400	0.037	0.005K	0.005K
73/11/10	14 00		0.570	0.300	0.012	0.005K	0.020
73/12/14	17 00		0.600	0.600	0.024	0.005K	0.005K
74/03/09	14 15		1.010	1.300	0.055	0.005	0.010
74/03/30	13 00		0.680	0.500	0.045	0.005K	0.010
74/04/17	18 10		0.730	0.200	0.025	0.005K	0.020

K VALUE KNOWN TO BE LESS THAN INDICATED

STORET RETRIEVAL DATE 75/02/03

3641N1
41 46 50.0 078 49 34.0
KINZUA CREEK
36 7.5 WESTLINE
T/ALLEGHENY RES
BANK OFF RD 2.5 MI W OF WESTLINE
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/05/19	09 30		0.210	1.470	0.048	0.005K	0.005K
73/06/10	08 45		0.231	3.300	0.140	0.005K	0.015
73/08/05	20 00		0.138	0.140	0.022	0.008	0.010
73/09/08	18 30		0.039	0.960	0.028	0.005K	0.010
73/10/11	16 40			0.500	0.027	0.005K	0.010
73/11/10	14 30		0.312	0.250	0.028	0.005K	0.025
73/12/19	16 00		0.368	0.400	0.024	0.005K	0.005
74/03/09	12 00		0.580	0.200	0.025	0.005	0.030
74/03/26	11 00		0.384	0.600	0.055	0.005	0.010
74/04/17	17 00		0.390	0.500	0.045	0.005K	0.020

K VALUE KNOWN TO BE LESS THAN INDICATED

STORET RETRIEVAL DATE 75/02/03

3641P1
41 45 10.0 078 51 58.0
S BRANCH KINZUA CREEK
36 7.5 WESTLINE
T/ALLEGHENY RES
RD BRDG .2 MI E OF JCT WITH HWY 321
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/05/19	10 50		0.300	1.300	0.072	0.020	0.030
73/06/10	09 30		0.350	2.730	0.120	0.021	0.050
73/08/05	20 10		0.370	0.890	0.035	0.048	0.080
73/09/08	18 50		0.231	3.000	0.040	0.065	0.100
73/10/11	17 00		0.138	1.400	0.046	0.052	0.080
73/11/10	14 05		0.490	0.300	0.036	0.028	0.100
74/03/09	12 30		0.700	0.400	0.055	0.010	0.050
74/03/26	12 00		0.528	0.300	0.045	0.020	0.040
74/04/17	17 30		0.440	0.100	0.030	0.005K	0.025

K VALUE KNOWN TO BE LESS THAN INDICATED

STORET RETRIEVAL DATE 75/02/27

364156
42 13 30.0 078 17 00.0
CUBA
36 1.250000 BUFFALO
T/ALLEGHENY RESERVOIR
OIL CREEK/OLEAN CREEK/ALLEGHENY RIVER
TIEPALES 2141204
0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	00631 FLOW RATE INST MGD	00053 CONDUIT FLOW-MGD MONTHLY
73/01/31	07 30								
CP(T)-			0.700	11.500	1.400	5.050	6.400	0.419	0.578
73/01/31	14 30								
73/02/22	07 30								
CP(T)-			0.390	6.300	2.300	4.200	4.600	0.427	
73/02/22	12 30								
73/03/30	07 30								
CP(T)-			0.760	6.300	0.550	3.500	5.250	0.656	0.750
73/03/30	12 30								
73/04/24	07 30								
CP(T)-			0.600	9.200	1.500	3.700	5.000	0.551	0.600
73/04/24	12 30								
73/07/06	07 00								
CP(T)-			0.480	8.700	0.270	3.400	4.500	0.385	
73/07/06	12 00								
73/07/26	07 30								
CP(T)-			0.820	8.800	0.220	2.500	3.900	0.507	0.410
73/07/26	13 30								
73/08/15	13 00		0.630	8.600	0.500	1.980	3.900	0.399	0.394
73/09/16	13 00		1.940	8.300	0.100	3.200	4.200	0.254	0.390
73/10/03	13 00		2.300	11.000	0.290	3.900	4.900	0.344	0.400
73/11/12	16 00		1.100	7.400	0.230	2.600	3.200	0.446	0.456
73/12/13	13 00		1.470	8.800	0.130	2.800	4.200	0.539	0.522
74/01/25	13 20		1.760	4.800	0.130	1.560	2.250	0.950	0.520
74/02/20	13 00		0.560	7.200	1.680	3.700	4.800	0.438	0.501

STORET RETRIEVAL DATE 75/02/27

364151 A>364151 P001405
42 04 00.0 078 10 00.0
BOLIVAR
36 1.250000 BUFFALO
T/ALLEGHENY RESERVOIR
LITTLE GENESSEE CREEK/ALLEGHENY RIVER
11EPALES 2141204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
72/12/19	08 00								
CP(T)-			2.060	5.900	0.189	1.045	1.900	0.500	0.520
72/12/19	16 00								
73/01/16	08 00								
CP(T)-			1.200	1.500	0.101	1.370	2.400	0.330	0.390
73/01/16	16 00								
73/02/20	08 00								
CP(T)-			1.370	7.000	0.450	1.400	2.200	0.280	0.390
73/02/20	16 00								
73/03/14	08 00								
CP(T)-			2.100	7.000	0.570	1.280	2.000	0.400	0.390
73/03/14	16 00								
73/04/12	08 00								
CP(T)-			1.890	6.400	1.300	1.200	2.000	0.430	0.450
73/04/12	16 00								
73/05/22	08 00								
CP(T)-			2.500	4.700	0.620	1.080	1.580	0.520	0.350
73/05/22	16 00								
73/06/18	07 30								
CP(T)-			1.600	8.100	0.190	1.400	2.100	0.300	0.340
73/06/18	15 30								
73/07/19	08 00								
CP(T)-			2.200	7.600	0.073	1.470	1.950	0.190	0.250
73/07/19	16 00								
73/08/20	08 00								
CP(T)-			3.940	5.200	0.420	0.860		0.620	0.280
73/08/20	16 00								
73/09/13	07 30								
CP(T)-			2.020	5.300	0.870	1.360	1.700	0.259	0.340
73/09/13	15 30								
73/10/18	07 30								
CP(T)-			1.640	7.100	0.037	1.430	2.030	0.280	0.230
73/10/18	15 30								
73/11/15	07 30								
CP(T)-			2.100	7.700	0.120	1.380	1.850	0.230	0.330
73/11/15	16 30								

STORET RETRIEVAL DATE 75/02/27

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 354151          A>464151      POLIKOS
42 34 00.0 078 10 00.0
BOLIVAR
36       1.250060 BUFFALO
T/ALLEGHENY RESERVOIR
LITTLE GENESSEE CREEK/ALLEGHENY RIVER
TIEPALES                  21412U4
4                         0000 FEET  DEPTH
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DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50050 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/12/03	07 40								
CP(T)-			2.700	6.300	0.190	1.150	1.650	0.330	0.320
73/12/03	15 40								

STORET RETRIEVAL DATE 75/02/27

364154 [illegible] [illegible]
42 04 30.0 078 10 33.0
[illegible]
55 1.2[illegible] BUFFALO
1/ALLEGHENY RESERVOIR
ALLEGHENY RIVER
11EPALES 2141[illegible]
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/01/31	09 30		0.680	13.000	1.580	1.260	2.150	2.400	2.600
73/02/28	13 45		0.880	23.000	2.900	2.600		1.470	2.570
73/03/31	15 00		1.050	12.600	0.830	1.100	2.500	2.330	1.180
73/04/30	14 00		0.440	11.000	0.590	1.050	2.500	3.420	4.190
73/06/05	11 00		0.231	12.000	1.200	1.060	2.500	3.300	3.360
73/06/30	11 30		0.010K	12.000	2.350	0.712	2.200	5.040	2.870
73/08/03	09 25		0.400	12.000	1.260	1.180	2.590	3.890	4.420
73/09/04	10 15		0.050	15.100	3.600	1.160	2.300	3.290	3.510
73/10/11	10 45		0.340	18.500	4.200	1.600	3.600	2.620	3.090
73/11/08	11 15		0.480	16.500	2.250	1.500	2.700	3.290	3.340
74/01/31	11 30		0.840	9.700	2.520	0.690	3.200	3.700	3.600
74/03/06	11 15		1.520	19.000	1.150	1.250	3.000	3.150	4.200

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 75/02/27

364155 [illegible]
42 02 30.0 078 26 30.0
PORTVILLE
36 1.250000 BUFFALO
ALLEGHENY RESERVOIR
DODGE CREEK/ALLEGHENY RIVER
[illegible]
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/01/09	09 00							0.302	0.350
73/02/07	08 30		2.500	4.200	0.850	0.480	0.890	0.441	0.300
73/03/07	08 15		1.900	15.000	2.200	1.470	2.750		0.280
73/04/11	08 00		2.300	36.000	0.990	0.530	0.800	0.605	0.600
73/06/13	08 10		1.140	8.100	2.350	0.990	1.800	0.292	0.525
73/07/10	08 30		0.200	11.000	1.470	1.050	2.100	0.430	0.378
73/08/06	09 00		0.100	13.600	0.870	0.635	2.200	0.400	
73/09/12	08 00		0.120	7.500	1.040	1.100	2.400	0.120	
73/10/09	09 00		0.050	5.550	0.320	1.380	2.650	0.113	0.116
73/11/13	08 00		0.500	4.200	0.140	0.660	1.650	0.226	0.201
73/12/12	10 25		0.600	12.500	0.530	1.150	1.900	0.252	0.220

STORET RETRIEVAL DATE 75/02/27

364156 A5364156 P0042S0
42 09 30.0 078 42 00.0
SALAMANCA
36 1.250000 BUFFALO
T/ALLEGHENY RESERVOIR
ALLEGHENY RIVER
11EPALES 2141204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/01/10	08 00								
CP(T)-			3.800	8.400	0.260	1.470	2.200	1.500	1.600
73/01/10	16 00								
73/01/31	08 00								
CP(T)-			2.100	5.500	0.110	1.470	2.000	1.500	1.600
73/01/31	16 00								
73/02/28	08 00								
CP(T)-			3.700	3.300	0.560	2.100	2.300	0.400	1.400
73/02/28	16 00								
73/04/04	08 00								
CP(T)-			0.900	4.400	0.480	0.455	1.550	1.200	1.300
73/04/04	16 00								
73/05/02	08 00								
CP(T)-			1.840	3.700	0.031	0.910	1.250	1.000	1.100
73/05/02	16 00								
73/06/20	08 00								
CP(T)-			1.300	1.780	1.000	1.470	2.300	1.200	1.100
73/06/20	16 00								
73/07/18	07 00								
CP(T)-			0.360	13.800	1.700	1.470	3.000	0.900	1.200
73/07/18	15 00								
73/08/08	08 00								
CP(T)-			0.330	13.200	1.900	1.500	2.600	0.900	1.000
73/08/08	16 00								
73/09/26	07 00								
CP(T)-			0.380	11.500	0.210	2.900	5.700	0.900	1.000
73/09/26	15 30								
73/11/13	07 00								
CP(T)-			0.690	6.100	0.230	0.590	1.500	0.800	1.000
73/11/13	15 00								
73/11/27	07 00								
CP(T)-			1.540	6.500	0.280	0.730	1.350	1.600	1.200
73/11/27	15 00								
73/12/05	07 00								
CP(T)-			1.380	8.000	0.200	0.740	1.300	1.430	1.100
73/12/05	15 00								

STORET RETRIEVAL DATE 75/02/27

364156 A5364156 0004250
42 09 30.0 078 42 00.0
SALAMANCA
36 1.250300 BUFFALO
T/ALLEGHENY RESERVOIR
ALLEGHENY RIVER
11CPALES 21412G4
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/12/18 CP(T)- 73/12/18	07 00 15 30		2.500	4.400	0.040K	1.640	2.300	1.200	1.000

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 75/02/24

3641DA A3641DA P0001063
41 56 53.0 078 23 07.0
BOROUGH OF ELDRED
36 MCKEAN COUNTY
T/ALLEGHENY RESERVOIR
ALLEGHENY RESERVOIR
11EPALES 2141204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLO#-MGD MONTHLY
73/08/08	07	00							
CP(T)-			9.000	0.540	0.100	2.500	4.500	0.167	0.150
73/08/08	15	00							
73/09/12	06	00							
CP(T)-			14.000	2.300	0.215	3.990	4.000	0.191	0.150
73/09/12	14	00							
73/10/11	06	00							
CP(T)-			14.800	0.750	0.230	5.000	5.500	0.187	0.165
73/10/11	14	00							
73/11/12	05	00							
CP(T)-			11.600	0.500K	0.120	2.600	4.800	0.231	0.200
73/11/12	13	00							
74/01/09	05	00							
CP(T)-			1.520	8.700	3.000	1.560	2.700	0.423	0.220
74/01/09	13	00							
74/02/12	05	00							
CP(T)-			1.160	14.000	2.730	2.100	4.100	0.212	0.225
74/02/12	13	00							
74/03/19	05	00							
CP(T)-			3.300	3.600	0.320	0.870	1.700	0.396	0.325
74/03/19	13	00							
74/04/11	05	00							
CP(T)-			1.480	1.000K	0.410	0.430	0.630	0.592	0.450
74/04/11	13	00							
74/05/13	05	00							
CP(T)-			1.760	3.800	0.730	0.450	0.860	0.462	0.245
74/05/13	12	00							
74/06/12	06	00							
CP(T)-			10.450	5.400	0.515	2.250	3.400	0.198	0.185
74/06/12	14	00							
74/07/23	05	00							
CP(T)-			13.500	2.000	0.320	2.700	3.300	0.170	0.181
74/07/23	13	00							
74/09/04	07	00							
CP(T)-			7.920	2.000	0.260	1.050	1.365	0.454	0.149
74/09/04	14	00							

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 75/02/24

364108
41 48 00.0 078 02 00.0
DAMASCUS TANNING COMPANY
36 7.5 COUDERSPORT
T/ALLEGHENY RESERVOIR
ALLEGHENY RIVER
11EPALES 2141204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/06/24	10 30		0.240	73.000	28.000	0.240	1.400	0.100	0.066
73/08/31	09 30					0.670	1.470	0.100	0.066
73/09/28	09 00						2.600	0.100	0.066
73/10/31	10 00			92.000			2.400	0.100	0.066
73/11/28	10 45			135.000			1.300	0.100	0.066
74/01/07	11 00			165.000			1.050	0.100	0.066
74/03/07	10 45							0.100	0.066
74/03/29	15 00							0.100	0.066
74/04/30	09 15		1.320	240.000	66.000		1.100	0.100	0.066
74/05/31	14 30			270.000			2.400	0.100	0.066
74/06/28	10 30		0.048	105.000	51.000	0.250	2.100	0.100	0.067

STORET RETRIEVAL DATE 75/02/24

3641UC TF 3641UC P0003000
41 49 30.0 079 17 40.0
PORT ALLEGHENY BOROUGH S.T.P.
36 MCKEAN COUNTY
1/ALLEGHENY RESERVOIR
ALLEGHENY RIVER
11EPALES 2141204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/06/28	07 00								
CP(T)-			8.400	5.900	0.920	2.500	3.900	0.650	0.800
73/06/28	17 00								
73/07/30	07 00								
CP(T)-			6.700	1.500	0.560	2.520	3.300	0.650	0.625
73/07/30	15 00								
73/08/30	08 00								
CP(T)-				3.300	0.660	2.600	3.500	0.649	0.700
73/08/30	16 00								
73/09/27	08 00								
CP(T)-			7.600	2.500	0.190	2.510	2.900	0.674	0.200
73/09/27	16 00								
73/10/31	08 00								
CP(T)-			8.000	2.250	0.290	1.700	2.200	0.900	0.600
73/10/31	16 00								
73/11/29	08 00								
CP(T)-			7.500	2.800	0.410	1.320	2.400	0.800	0.750
73/11/29	16 00								
73/12/31	08 00								
CP(T)-			6.300	4.750	0.490	1.380	1.930	0.802	0.775
73/12/31	16 00								
74/01/30	08 00								
CP(T)-			1.400	2.400		1.480	2.200	0.875	0.700
74/01/30	16 00								
74/02/27	08 00								
CP(T)-			6.000	4.600	1.050	1.725	2.400	0.676	0.750
74/02/27	16 00								
74/03/29	08 00								
CP(T)-			4.100	3.600	0.540	1.650	2.500	0.700	0.875
74/03/29	16 00								
74/04/30	08 00								
CP(T)-			5.000	2.400	0.340	1.850	3.300	0.795	0.975
74/04/30	16 00								
74/05/31	08 00								
CP(T)-			11.200	6.700	3.930	2.700	4.000	0.578	0.700
74/05/31	16 00								

STORET RETRIEVAL DATE 75/02/24

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                                                    3R41DC          TF3R41DC      P0030000
41 49 30.0 078 17 40.0
PORT ALLEGHENY BOROUGH S.T.P.
36      MCKEAN COUNTY
1/ALLEGHENY RESERVOIR
ALLEGHENY RIVER
11EPALES                                            2141204
4                                                   0000 FEET  DEPTH
```

DATE FROM TO	TIME OF DAY	DEPTH FEET	00530 RESIDUE -TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
74/07/01	07 30								
CP(T)-			7.000	5.600	0.470	1.650	2.500	0.750	0.675
74/07/01	15 00								

STORET RETRIEVAL DATE 76/02/04

364100 S0364100 P0000000
41 48 00.0 079 16 30.0
PITTSBURGH CORNING CORPORATION
36 MCKEAN COUNTY
1/ALLEGHENY RESERVOIR
ALLEGHENY RIVER
11EPALES 2141204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50050 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/07/30	13 35		0.980	0.140	0.066	0.070	0.110	0.110	0.110
73/08/28	13 30		0.970	0.140	0.091	0.060	0.060	0.110	0.110
73/09/27	14 05		1.200	1.000K	0.040	0.210	0.670	0.110	0.110
74/06/05	10 00		1.160	1.000K	0.050K	0.030	0.073	0.110	0.110
74/07/03	09 30		0.880	1.000K	0.070	0.040	0.050K	0.110	0.110
74/08/01	10 00		0.960	1.000K	0.110	0.090	0.025	0.110	0.110
74/08/29	10 30		0.040	2.300	0.050K	0.050K	0.062	0.110	0.110
74/09/27	10 30		1.000	0.500K	0.140	0.045	0.030	0.110	0.110
74/10/29	14 00		1.040	1.000K	0.050K	0.087		0.110	0.110
74/11/26	13 30		0.960	1.000K	0.150	0.140	0.100K	0.110	0.110
74/12/23	09 00		1.040		0.084	0.230		0.110	0.110
75/01/20	10 00								0.110

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 75/02/28

3641DE PA3641DE 42005000
41 40 50.0 079 16 53.0
PIERCE GLASS COMPANY
39 ALLEGHENY COUNTY
1/ALLEGHENY RESERVOIR
ALLEGHENY RIVER
11EPALED 2141204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/07/26	10	55	0.630	0.360	0.240	0.026	0.050	0.223	0.223
73/08/08	10	45	0.830	0.340		0.044	0.060	0.223	0.223
73/09/04	14	45	1.140	1.000			0.060	0.223	0.223
73/10/01	00	00	0.700	0.580	0.027	0.068	0.085	0.223	0.223
73/10/30	13	15	0.840	1.000	0.150	0.110	5.400	0.223	0.223
73/11/30	14	00	0.880	0.500K	0.010K	0.180	0.490	0.223	0.223
74/01/02	15	30	1.400	0.500K	0.100	0.190		0.223	0.223
74/02/04	14	45	0.940	1.000K	0.040K		0.120	0.223	0.223
74/02/28	14	00	1.120	1.000	0.069		0.050K	0.223	0.223
74/04/01	15	30	0.760	1.000K	0.080	0.083	0.300	0.223	0.223
74/04/25	14	30	0.560	2.500	0.180	0.079	0.140	0.223	0.223

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 75/02/24

3641DF A5364LUF P0037SU
41 44 00.0 078 00 00.0
COUDERSPORT WASTEWATER TREATMENT
36 POTTER COUNTY
1/ALLEGHENY RESERVOIR
ALLEGHENY RIVER
11EPALES 21420
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50050 FLOW RATE INST CFS	50053 CONDUIT FLOW-MGD MONTHLY
73/12/04	10	30	1.470	7.500	0.205	1.280	1.800	0.491	0.450
74/01/14	10	30	0.160	14.500	7.600	1.560	2.100	0.678	0.690
74/02/08	10	30	1.000	17.000	5.800	0.910	1.900	0.756	0.725
74/03/04	10	15	1.440	9.000	3.130	0.535	1.200	0.757	0.650
74/04/16	10	30	1.680	8.700	2.600	0.550	1.250	0.820	0.600
74/05/16	10	45	1.320	8.600	2.100	0.490	1.450	0.800	0.730
74/06/12	11	00	0.120	44.000	18.000	2.500	5.000	0.380	0.500
74/07/10	11	00	0.400	6.300	1.400	1.200	1.200	0.700	0.800
74/08/08	11	00	0.160	22.000	10.000	1.550	2.100	0.580	0.750
74/09/09	11	00	0.720	18.000	9.400	0.980	1.650	0.550	0.750
74/10/09	11	30	0.280	15.000	6.730	1.250	1.700	0.600	0.750
74/11/11	11	00	0.160	16.000	9.000	1.200	1.450	0.700	0.650
74/12/10	11	00	1.920	9.300	2.800	0.400	1.200	0.750	0.750

STORET RETRIEVAL Date 75/02/24

364154 11 364154 P002500
41 39 15.0 078 49 30.0
BOROUGH OF KANE S.T.P. (PINE ST)
36 MCKEAN COUNTY
1/ALLEGHENY RESERVOIR
REST RUN
11EMALES 2141204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/07/16	08	00	3.400	11.000	2.600	3.400	4.600	0.352	0.371
73/09/04	04	00	2.420	11.000	1.320			0.202	0.226
73/11/30	10	00	2.940	4.800	2.200	1.470	2.300	0.488	0.342
73/12/28	08	00	2.950	2.500	0.890	0.380	0.610	0.684	0.523
74/01/31	11	00	1.480	4.500	3.400	1.040	2.900	0.438	0.615
74/04/05	11	00	1.360	3.300	1.550	0.510	0.760	1.540	0.722
74/05/03	13	30	0.520	13.000	5.900	1.880	2.700	0.471	0.792
74/06/14	15	00	4.900	17.000	7.700	3.750	5.000	0.267	0.483

STORET RETRIEVAL DATE 74/12/24

[illegible] [illegible] P0025000
41 40 39.0 078 45 27.0
DUPOUOM OF KAVE 3.1.P.(KINZUA RD
35 MCKEAN COUNTY
1/ALLEGHENY RESERVOIR
MUSKRT RUN/S. FRANCH KINZUA CREEK
11EMALES 21412U4
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/07/16	09	00	1.980	10.500	4.400	4.800	6.100	0.314	0.353
73/09/04	09	00	4.300	12.600	2.100			0.238	0.242
73/11/30	09	00	5.000	5.300	1.900	1.470	2.600	0.500	0.437
73/12/26	09	00	2.700	2.900	1.150	0.590	0.790	0.836	0.618
74/01/31	10	00	1.480	4.900	3.600	1.800	3.900	0.516	0.626
74/04/05	10	30	1.480	5.700	1.400	0.640	1.000	1.210	0.658
74/05/03	11	00	0.600	11.000	5.000	2.400	3.450	0.475	0.625
74/06/14	10	00	5.300	14.900	4.700	4.900	5.800	0.295	0.478

A22

STORET RETRIEVAL DATE 75/02/24

3941VA A3J641VA P000050
41 02 00.0 078 26 30.0
MCKEAN COMPANY (CLEARFIELD)
36 7.5 CLEARFIELD
T/ALLEGHENY RESERVOIR
THREE MILE RUN/ALLEGHENY RIVER
11EPALES 2141204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/09/17	12 00		20.000	0.500K	0.080K	0.740	1.000	0.005	
73/10/17	14 00		21.000	0.500K	0.025	0.670	0.870		
73/11/16	14 00		22.000	11.500	6.300	0.210	1.200	0.001	0.001
73/12/17	12 30		32.000	4.700	2.940	0.260	0.670		
74/01/18	11 00		36.000	7.300	4.100	0.220	2.500		0.001
74/02/19	11 00		12.600	20.000	9.700	0.750	1.750	0.001	
74/03/15	11 00		0.400	44.000		0.050K	4.000	0.005	0.001
74/04/17	11 00		3.520	52.000	47.200	0.500	2.600	0.001	
74/05/17	13 00		0.120	74.000	47.200	0.290	2.400	0.001	
74/06/17	11 00		0.640	60.000	40.000	0.470	2.200		0.001
74/07/17	10 00		0.120	48.000	0.390	0.380	2.200		0.001
74/08/19	11 30		4.500	39.000	25.000	0.170	1.500		
74/09/17	13 00		19.200	24.500	10.500	0.447	1.760		

K VALUE KNOWN TO BE
LESS THAN INDICATED

-82-

STORET RETRIEVAL DATE 73/02/24

3ealeo MH3641WA P02>000
41 58 46.0 678 37 37.0
BRADFORD SANITARY AUTHORITY
36 MCKEAN COUNTY
1/ALLEGHENY RESERVOIR
1UNDUNWANT CREEK/ALLEGHENY RIVER
1ILEPALES 214120N
0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/07/02	08 00								
CP(T)-			0.231	11.500	2.450	0.450	2.900	5.200	5.300
73/07/02	16 00								
73/07/30	08 00								
CP(T)-			0.420	8.900	4.200	1.000	2.000	4.800	5.300
73/07/30	16 00								
73/09/12	08 00								
CP(T)-			0.300	13.800	5.900	1.420	2.500	4.200	4.400
73/09/12	16 00								
73/10/24	08 00								
CP(T)-			0.660	15.500	7.000	1.500	2.600	4.000	4.100
73/10/24	16 00								
73/11/06	08 00								
CP(T)-			0.420	9.300	1.400	0.730	2.000	4.000	4.200
73/11/06	16 00								
73/12/21	08 00								
CP(T)-			2.800	8.400	0.740	0.680	1.850	6.400	4.400
73/12/21	16 00								
74/01/15	08 00								
CP(T)-			0.560	13.000	2.100	0.330	2.700	4.700	4.800
74/01/15	16 00								
74/02/04	08 00								
CP(T)-			1.120	6.500	2.700	0.910	1.600	5.500	5.100
74/02/04	16 00								
74/03/04	08 00								
CP(T)-			2.240	6.700	0.420	0.590	1.350	7.500	5.100
74/03/04	16 00								
74/04/10	08 00								
CP(T)-			1.600	2.200	0.700	0.410	0.740	6.000	4.400
74/04/10	14 00								
74/05/24	08 00								
CP(T)-			1.440	13.000	3.450	0.820	2.000	5.000	4.800
74/05/24	15 30								
74/06/10	08 00								
CP(T)-			0.820	19.000	9.400	2.400	4.700	4.800	4.600
74/06/10	15 00								

STORET RETRIEVAL DATE 75/02/24

3641WA PA3041WA P025000
41 58 40.0 078 37 37.0
BRADFORD SANITARY AUTHORITY
36 MCKEAN COUNTY
T/ALLEGHENY RESERVOIR
TUNUNGWANT CREEK/ALLEGHENY RIVER
11EPALES 2141204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
74/07/06	08 00								
CP(T)-			0.860	12.000	4.450	0.820	2.600	5.110	4.200
74/07/06	16 00								

8C

STORET RETRIEVAL DATE 73/12/24

3641#B NO3bM1#M P0000J0*
#1 3/ 17.0 078 38 32.0
W.R. CASE AND SONS CUTLERY CO.
39 MCLEAN COUNTY
1/ALLEGHENY RESERVOIR
1UNQUEWAUG CREEK/ALLEGHENY RIVER
11EMILES 2141234
0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/06/27	14	30	0.378	1.100	0.170	0.120	0.160	0.010	0.010
73/08/27	14	00	0.270	0.130	0.130	0.050	0.092	0.010	0.010
73/09/27	13	00	0.240	0.800	0.230	0.066	0.135	0.010	0.010
73/10/25	10	30	0.080	8.200	0.315	0.210	2.700	0.010	0.010
73/11/26	10	00	0.340	0.400	0.220	0.150	0.180	0.010	0.010
73/12/27	13	00	0.400	0.770	0.260	0.130		0.010	0.010
74/01/24	09	00	0.520	0.500K	0.270	0.063	0.130	0.010	0.010
74/02/27	09	30	0.560	1.000K	0.250	0.240	0.900	0.010	0.010
74/03/27	09	30	1.060	1.000K	0.170	0.140	0.170	0.010	0.010
74/04/30	08	30	0.660	1.000K	0.360	0.210	0.320	0.010	0.010
74/05/28	08	30	0.585	1.200	0.160	0.140	0.230	0.010	0.010
74/06/27	09	30	0.400	1.000K	0.317	0.290	0.420	0.010	0.010

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 75/02/24

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 3641WC          NU3641WC      P0000000
41 54 27.0 078 39 00.0
ZIPPO MFG COMPANY (BRADFORD)
36       MCKEAN COUNTY
1/ALLEGHENY RESERVOIR
EAST BRANCH TUNUNEWANT CR/ALLEGHENY RIV
11EPALES                  2141204
4                         0000 FEET  DEPTH
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DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50050 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/08/07	11	00							
CP(T)-			0.440	0.880	0.530		0.079	0.018	0.012
73/08/07	14	00							
73/09/10	11	00							
CP(T)-			0.340	5.100	2.000	0.120	0.540	0.018	0.012
73/09/10	14	00							
73/10/10	11	00							
CP(T)-			0.134	2.400	1.300	0.086	0.270	0.018	0.012
73/10/10	14	00							
73/11/09	11	00							
CP(T)-			0.330	0.500K	0.240	0.094	0.110	0.018	0.012
73/11/09	14	00							
73/12/11	11	00							
CP(T)-			0.580	0.500K	0.260	0.160	0.190	0.018	0.012
73/12/11	14	00							
74/02/12	11	00							
CP(T)-			0.800	1.300	0.260	0.110	0.310	0.018	0.012
74/02/12	14	00							
74/03/12	11	00							
CP(T)-			0.040	1.200	0.050K	0.050K	0.120	0.018	0.012
74/03/12	14	00							
74/04/15	11	00							
CP(T)-			0.880	1.000K	0.690	0.040	0.270	0.018	0.012
74/04/15	14	00							
74/05/15	11	00							
CP(T)-			0.840	2.300	0.850	0.070	0.170	0.018	0.012
74/05/15	14	00							
74/06/12	11	00							
CP(T)-			0.720	1.000K	0.280	0.060	0.170	0.018	0.012
74/06/12	14	00							
74/08/13	11	00							
CP(T)-			0.540	2.200	0.560	0.164	0.290	0.018	0.012
74/08/13	14	00							
74/09/12	10	30							
CP(T)-			0.430	0.580	0.580	0.030	0.040	0.018	0.012
74/09/12	13	30							

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 74/12/24

[illegible] 00300 P0000000
41 39 27.0 078 39 00.0
ZIPPO MFG COMPANY (BRADFORD)
39 MCKEAN COUNTY
1/ALLEGHENY RESERVOIR
EAST BRANCH TUNNELHEAD [illegible] CR/ALLEGHENY RIV
11PA421 2141204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50050 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
74/10/17	11 00								
CP(T)-			0.540	2.100	0.300	0.050	0.360	0.018	0.012
74/10/17	14 00								

STORET RETRIEVAL DATE 73/12/14

[illegible] [illegible] 00400

[illegible] 00.0 JAN 02 00.0
CHAS. COLE MEMORIAL HOSPITAL
39 7.5 SHINGLEHOUSE
T/ALLEGHENY RESERVOIR
MILL CREEK/ALLEGHENY RIVER
[illegible] 42412014
[illegible] 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	01671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	00061 FLOW INST MGD	00053 CONDUIT FLOW-MGD MONTHLY
73/07/09	09	30	4.300	12.600	2.300	4.950	6.600	0.019	0.018
73/08/10	10	00	5.700	1.380	0.180	4.500	4.900	0.019	0.017
73/09/10	10	00	8.500	3.900	0.140	4.210	4.400	0.019	0.019
73/10/10	10	00	9.350	0.850	0.150	4.650	5.250	0.018	0.020
73/11/11	10	30	17.000	2.400	0.230	6.200	7.100	0.021	0.020
73/12/11	10	30	7.600	2.900	0.059	9.000	9.000	0.019	0.020
74/03/28	08	00							
CP(T)-			6.900	4.500	0.160	6.900	8.000	0.021	0.020
74/03/28	14	00							
74/07/22	11	00	9.650	10.000	1.600	5.000	5.900	0.021	0.018
74/08/30	12	30	6.750	8.000	0.100	5.700	6.300	0.021	0.018
74/09/26	10	00	20.500	4.500	0.350	7.450	7.975	0.021	0.020
74/11/26	10	00	16.400	5.200	0.410	7.650	9.700	0.021	0.020

STORET RETRIEVAL DATE 75/02/24

3641TA A3364ITA P001320
41 55 00.0 078 11 00.0
3MINGLEMOUSE
30 F.S COUDERSPORT
T/ALLEGHENY RESERVOIR
USGAGE CREEK/ALLEGHENY RIVER
11EMALES 2141204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/06/21	11 00								
CP(T)-			0.410	14.000	5.900	4.100	5.010	0.130	0.130
73/06/21	16 00								
73/07/24	11 00								
CP(T)-			0.480	10.500		4.300	5.600	0.130	0.130
73/07/24	16 00								
73/08/21	10 00								
CP(T)-			0.770	9.500	3.480	4.400	4.900	0.130	0.130
73/08/21	16 00								
73/09/24	11 00								
CP(T)-			0.560	13.500	4.900	4.200	4.800	0.130	0.130
73/09/24	16 00								
73/10/15	11 00								
CP(T)-			11.200	12.500	8.600	6.700	6.800	0.130	0.130
73/10/15	16 00								
73/11/21	11 00								
CP(T)-			2.400	9.400	3.200	3.100	4.000	0.130	0.130
73/11/21	16 00								
73/12/24	11 00								
CP(T)-			2.100	6.400	2.000	2.100	2.700	0.130	0.130
73/12/24	16 00								
74/01/21	11 00								
CP(T)-			1.280	7.100	2.600	1.520	2.300	0.130	0.130
74/01/21	16 00								
74/02/21	11 00								
CP(T)-			1.480	11.000	3.450	3.100	4.100	0.130	0.130
74/02/21	16 00								
74/03/18	11 00								
CP(T)-			0.960	9.500	3.100	2.200	3.400	0.130	0.130
74/03/18	16 00								
74/04/24	11 00								
CP(T)-			0.560	12.000	3.200	1.850	2.700	0.130	0.130
74/04/24	16 00								
74/05/29	11 00								
CP(T)-			0.800	16.000	5.250	2.300	3.400	0.130	0.130
74/05/29	16 00								

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STORET RETRIEVAL DATE 75/12/24

Jb41ZA AS3b41ZA P0018B3
41 49 31.0 078 25 42.0
SMETNPORT
Jb MCKEAN COUNTY
T/ALLEGHENY RESERVOIR
POTATO CREEK/ALLEGHENY RIVER
11EPALES 2141204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/06/19	10	00							
CP(T)-			2.400	2.030	0.525	2.000	2.400	0.300	0.290
73/06/19	14	30							
73/07/19	10	00							
CP(T)-			0.690	4.500	0.670	3.570	4.000	0.290	0.270
73/07/19	14	30							
73/08/20	10	30							
CP(T)-			4.200	0.150	0.154	2.080	2.100	0.300	0.270
73/08/20	14	30							
73/09/19	10	30							
CP(T)-			2.000	1.800	0.570	2.200	2.400	0.360	0.190
73/09/19	14	30							
73/10/19	10	30							
CP(T)-			1.470	3.500	0.154	2.100	2.500	0.303	0.323
73/10/19	14	30							
73/11/16	10	30							
CP(T)-			5.600	2.400	0.300	1.500	1.900	0.346	0.323
73/11/16	14	30							
73/12/19	10	30							
CP(T)-			4.800	3.500	0.770	0.580	1.000	0.303	0.304
73/12/19	14	30							
74/01/18	10	30							
CP(T)-			3.610	7.700	0.925	1.090	1.600	0.354	0.353
74/01/18	14	30							
74/02/18	10	30							
CP(T)-			4.000	2.600	0.700	1.520	1.800	0.330	0.366
74/02/18	14	30							
74/03/18	10	30							
CP(T)-			3.120	1.000K	0.790	1.250	1.500	0.320	0.319
74/03/18	14	30							
74/04/18	10	30							
CP(T)-			3.200	2.000	0.670	0.970	1.250	0.370	0.375
74/04/18	14	30							
74/05/16	10	30							
CP(T)-			3.300	3.500	0.270	0.930	1.400	0.382	0.368
74/05/16	14	30							

K VALUE KNOWN TO BE
LESS THAN INDICATED

86
A

STORET RETRIEVAL DATE 75/02/24

36417A AS36417A P001883
41 49 31.0 078 25 42.0
SMETHPORT
35 MCKEAN COUNTY
1/ALLEGHENY RESERVOIR
POTATO CREEK/ALLEGHENY RIVER
11ERALES 2141204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
74/06/18	10 30								
CP(I)-			4.000	2.000	0.440	1.050	1.350	0.360	0.360
74/06/18	14 36								

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STORET RETRIEVAL DATE 73/12/24

SPCLZM
41 51 25.0 079 20 55.0
QUAKER STATE OIL REFINING CORP.
39 MCKEAN COUNTY
1/ALLEGHENY RESERVOIR
POTATO CREEK/ALLEGHENY RIVER
11EPALES 2141204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/06/27	11 00		0.095	0.100K	0.018	0.082	0.120	5.760	5.960
73/07/27	08 30		0.070	0.340	0.100	0.039	0.076	7.210	7.000
73/08/27	08 30		0.125	0.100K	0.034	0.062	0.100	0.701	7.060
73/09/27	08 00		0.150	0.140	0.010	0.030	0.080	6.370	6.060
73/11/27	11 00		0.100	0.250	0.053	0.100	0.115	5.820	5.900
73/12/26	08 30		0.320	0.500K	0.047	0.150	0.210	5.870	5.910
74/01/24	11 00		0.280	0.500K	0.091	0.110	0.110	6.100	6.190
74/02/27	08 30		0.160	1.000K	0.050K	0.120	2.800	4.920	5.950
74/03/27	09 00		0.320	1.000K	0.110	0.110	0.300	7.780	6.270
74/06/05	09 00		0.120	1.000K	0.050K	0.110	0.150	7.660	6.270
74/07/06	08 00		0.200	1.000K	0.078	0.110	0.110	8.640	6.270
74/08/04	09 00		0.080	1.000K	0.050K	0.085	0.130	7.690	6.270

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K VALUE KNOWN TO BE
LESS THAN INDICATED